DOCUMENT RESUME

ED 250 862	EC 170 897
TITLE	PRISE Reporter. Issues and Happenings in the Education of the Mentally Retarded. Volumes 13-15, November 1981-May 1984.
INSTITUTION	Pennsylvania Resources and Information Center for Special Education (PRISE), King of Prussia, Pa.
SPONS AGENCY	Montgomery County Intermediate Unit 23, Blue Bell, Pa.; Pennsylvania State Dept. of Education, Harrisburg. Bureau of Special Education.
PUB DATE	[82]
NOTE	77p.
PUB TYPE	Collected Works - Conference Proceedings (021) -- Viewpoints (120)
JOURNAL CIT	PRISE Reporter; v13-15 Nov 1981-May 1984
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Age; Court Litigation; *Deaf Interpreting; *Disabilities; Educational Needs; Elementary Secondary Education; Hearing Impairments; Learning Disabilities; Legal Responsibility; *Low Vision Aids; Physical Disabilities; Program Development; Reading Instruction; Severe Disabilities; *Student Evaluation; Student Placement; Visual Impairments

ABSTRACT

The "PRISE Reporter" newsletter is issued six times a school year, generally from November through May. This collection of 18 issues examines the following special education topics: "Chronological Age in the Design of Educational Programs for Severely and Profoundly Impaired Students" (L. A. Larsen and L. B. Jackson); "Beyond Reading Skills: Reading for Meaning" (J. W. Lerner and M. A. Richek); "An Alternative to Categorical Placement: A Needs Approach" (H. Reinert); "Low Vision Aids and Vision Rehabilitation" (C. Eagan); "Psychological Evaluation of Physically Handicapped Students" (H. D. Love); "The Amy Rowley Case" (K. Hull); "Orientation and Mobility: A Generic Approach. Methods to Develop Independent Travel Skills" (B. H. Williams); "Microcomputers in Special Education: The Potential and the Pitfalls" (A. E. Hannaford); "Integrating Seriously Emotionally Disturbed Students with Nonhandicapped Students" (W. Stainback and S. Stainback); "Applications of Small Computers in the Education of the Blind" (D. Holladay); "Science Education and the Handicapped" (H. Hofman); "Pragmatics: Study of the Functional Uses of Language" (A. L. H. Lehman); "Teaching for Generalization" (K. A. Liberty); "Research Institutes in Learning Disabilities" (B. Y. L. Wong); "Emotional Disturbance or Behavior Disorders: Semantics or Substance?" (F. M. Gresham); "Returning the Head Injured Student to the School: A Team Approach (W. R. Bauer); "Management of the Young Stutterer in the Classroom" (R. Morley); and "Technology and Braille Transcriptions" (C. Gilbertson). In addition, each issue contains brief articles under the following headings: Research Brief, Current Citations, Instructional Material, New Film, Test, and Dissemination Happenings. (DRB)

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PRISE reporter
issues and happenings in the
education of the mentally retarded
Volume no. 13, november 1981

pennsylvania resources and information center for special education 1013 West Ninth Avenue, King of Prussia, Pa. 19406. 215/265-7321

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ED250862

CHRONOLOGICAL AGE IN THE DESIGN OF EDUCATIONAL PROGRAMS FOR SEVERELY AND PROFOUNDLY IMPAIRED STUDENTS

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A number of useful principles have emerged from the chaos that has encumbered the education of severely and profoundly impaired students since litigation first extended education to this population in the early 1970s. Some of these principles, for example, the individual education program requirement, are legally mandated while others, such as the use of a transdisciplinary planning and programming approach, are not. The principles also vary in the research support that can be found for them. Applications of applied behavior analysis in instruction, for example, are substantiated by a wealth of applied research data, while there is surprisingly little empirical justification for basing individual program plans on comprehensive assessment data.

The Rationale for Age-Appropriate Education. Another principle, that educational activities and settings be age-appropriate, has a limited legal basis and little research support. The term "appropriate" is used in P.L. 94-142 to describe the kind of education that must be provided for each handicapped student; however, what constitutes an appropriate educational effort is not spelled out. Other legal definitions, such as one state's equating "appropriate special education programs" with "those services defined in each child's individualized education program," are of little help. They fail to provide any objective criteria for differentiating appropriate from inappropriate programs, and their circularity suggests an overriding concern with protecting the educational system from an onslaught of parental objections.

Many recent publications have urged us to use chronological age as a program design variable, but most of these are position papers, and a recent literature search failed to locate any research findings attesting to its utility or educational significance. We must point out, however, that educational practices do not depend on research for their justification; research findings lag behind educational innovations as often as they precede them.

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The lack of any legal or empirical basis for considering chronological age in the education of handicapped students obliges us to look beyond legal documents and research journals for our rationale. We can find what we need in the implications of the normalization principle.

In his most recent formulation of it, Wolfensberger has defined normalization as the "utilization of means which are as culturally normative as possible, in order to establish and/or maintain personal behaviors and characteristics which are as culturally normative as possible." We can tailor this definition to our purpose by changing a few words: *Age-appropriate education is the utilization of means which are as chronologically age-appropriate as possible, in order to establish and/or maintain personal behaviors and characteristics which are as chronologically age-appropriate as possible.*

One might question whether it is the proper goal of special education to produce chronologically age-appropriate behavior and characteristics. By definition, many handicapped students lag behind the development of their age peers. Won't setting this goal, despite our highly acclaimed behavior technology, destine our students to failure? Shouldn't our program objectives reflect the reality that handicapped students, as a group, will never exit from the educational system on a par with their nonhandicapped peers?

In the best of worlds we would overwhelm the reader with references to a voluminous research literature attesting to the benefits of establishing normal behavior and characteristics as the goal of special education. In the absence of this literature, we can only say that special education *ought* to have this as its mission. No, we will not be completely successful. And yes, if our graduates are mixed with their normal counterparts we will still be able to pick them out. We will, however, have an important and agreed upon reason for our existence. Our goals for students will stress skills relevant to the general culture, rather than skills that have a proven value only in special education classrooms. And, no less important, we will seriously question our use of many of the accoutrements of special education (e.g., pegboards, puzzles, and primary color flashcards) that make up our educational bag of tricks—and which are giving us a bad reputation. We may even be able to do so without some of the kits, packages, curriculums, guides, devices, and audiovisual aids that presently fill our storage closets.

Chronological Age vs. Developmental Level in Program Design. There are two meanings to the term "developmental approach." In one meaning, adopting this approach is to believe that all persons are capable of learning and growth. This usage is a refreshing change from the belief that many handicapped persons, and particularly the severely and profoundly impaired, are incapable of profiting from educational experiences. We hope and trust that every special educator believes in this meaning.

A second interpretation has more direct implications for program design and is more likely to be seen as contradicting the principle of age-appropriate education. The proponents of this interpretation believe that the analysis of a large number of vocational, self-care, daily living, etc., skills into their constituent elements will yield a finite set of developmental building blocks which, if taught and combined in various ways, will be sufficient for the acquisition of all those skills. Furthermore, this interpretation assumes that all humans progress through the same sequence of developmentally ordered skills and that it is inefficient, if not impossible, to teach any individual any skill (other than an inferior splinter skill) that deviates in an upward direction from the normal sequence.

Applying this interpretation involves describing the milestones that mark normal development in each domain at different chronological ages; determining each student's current position with respect to these milestones through the use of standardized tests; selecting the milestones (or their behavioral referents) which are immediately above those exhibited by each student in each domain as educational goals; and devising educational programs to attain those goals.

The developmental approach, thus defined, has logical appeal and some empirical support, for instance in Piaget's description of sensorimotor development where all children have been shown to progress through the same steps as they acquire concepts of object permanence, means-ends relations, causality, and space. The same holds true in the area of language where, although certain variations from the normal sequence are both tolerable and functional, developmental sequences provide useful guidelines.

In view of this, we conclude that nothing is to be gained by ignoring our knowledge of normal development in a misguided effort to respect the chronological ages of our students. Yet, there is something wrong. The time and energy that we have devoted to teaching basic skills to severely and profoundly impaired students has not yielded the intended benefits. One of the problems, perhaps, is that recombining their skills to meet the demands of new purposes is not one of the propensities of most severely and profoundly impaired persons. There is little guarantee, for example, that the teenage boy who acquires visual discrimination skills by differentiating circles from squares and fine motor skills through manipulating pegboard pegs will, as a result, be proficient at discriminating a men's room from a women's room and in performing the zipping and unzipping skills required. Perhaps for the same reason that few lifelong residents of the Sahara desert are accomplished swimmers, it is apparently impossible to produce age-appropriate behaviors through the use of age-*in*appropriate means.

What is needed is a rapprochement between the developmental approach and the principle of age-appropriate education. This would be expressed in activities and settings that simultaneously match the students' developmental levels *and* correspond to their chronological ages. If chronological age is thus employed, we will see students of different ages participating in instructional activities designed to achieve the same educational outcome, but which appear quite different to the observer.

Guidelines for Age-Appropriate Education. As with many tactics used in the education of handicapped students, teacher innovation, coupled with a high regard for the individuality of each student, plays an important role in the development of age-appropriate programs. The following guidelines provide some directions, but cannot replace the thoughtful and creative efforts of a teacher totally familiar with his or her students.

1. Teach age-level activities in natural settings, using task analysis to match tasks to students. The most direct application of the age-appropriate principle is to define the skills that are frequently exhibited by the student's age peers, select several of these skills to teach (using developmental data as needed), and implement instruction in one or more natural settings. Task analysis, coupled with sound behavioral procedures, will yield the best results. For teenage youths, some sample skills normally performed by age peers are using public transportation, eating at fast food restaurants, displaying appropriate social behavior toward members of the opposite sex, and engaging in self-care skills tailored to the customs of the times (hairstyles, clothing choices, etc.).

2. Teach developmentally basic skills with age-appropriate materials and tasks. Most fundamental skills can be related to activities appropriate to different chronological ages. Object permanence is seen when a child finds a hidden toy or when a young adult looks for his socks in a drawer; movement and imitation skills can be expressed by a child listening to a child's record or by an adolescent responding to popular music. The early semantic concept of disappearance is expressed by a child noting the absence of a favorite toy and by a young adult saying that he has just missed the bus. Motor skills, such as pushing and pulling are observed when a young child manipulates a toy truck and when an older student plays shuffleboard.

3. Provide instructional environments that reflect chronological age. Classroom decorations, furniture, and layouts should correspond to the chronological ages of the students. For example, television or music celebrities are more appropriate subject matter for wall posters in classrooms for teenage students than are Disney characters. Classrooms for adolescents should not look like they had just been vacated by a group of preschoolers.

4. Reduce barriers posed by handicaps through activity and environmental modifications and the use of prosthetic devices. In many instances it is possible to adjust leisure and other activities to the mental and physical characteristics of handicapped students through material modifications, rule revisions, or prosthetic devices. Wheelchair basketball is a common example of such an adjustment; a baseball that emits a sound for the blind batter is a more recent innovation. Advances in electronic technology will undoubtedly provide the handicapped with many more opportunities to participate in normal activities in future years.

We believe that the severely impaired students' best shot at receiving the benefits and rights we take for granted rests in their ability to look and act in culturally normal ways. This demands that the students respond with age-appropriate behaviors in age-appropriate settings. Given this perspective, our responsibilities are clear. Skills that are directly relevant to present and future environments must be taught through activities which match the students' chronological ages. The severity of students' handicapping conditions can present a challenge, but it can no longer justify their treatment as eternal children.

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National Diffusion Network
The National Diffusion Network (NDN) is a nationwide system which helps local school districts improve their educational programs by making previously developed exemplary programs available for adoption or adaptation. As part of its system, the National Diffusion Network funds a number of State Facilitators who are responsible for helping interested school districts match their local needs with an NDN model program. These State Facilitators also provide the information, training and implementation assistance needed for local implementation. As an awareness service for Pennsylvania special

educators, the **PRISE Reporter** will include brief descriptions of selected exemplary programs in the NDN System. The following paragraph describes one of these programs relevant to mainstreaming handicapped students. For further information on this or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (R.I.S.E.), 725 Caley Road, King of Prussia, PA 19406. Telephone: 215/265-6056.

Learncycle: Responsive Teaching

This is a teacher training program that is designed to help teachers manage and instruct mainstreamed students in grades K-9. The program trains teachers in behavior modification techniques that enable them to pinpoint exactly what problems and goals they want to work on, how they can best arrange class activities and their own behavior to motivate students, and how to structure a classroom so there is no reward for acting up. The course also shows teachers how to monitor, evaluate and revise their teaching in accord with changing student needs. Validation studies of the original program showed that, after training, teacher referrals of problems decreased by 50 percent and students spent 30 percent more time on-task. The program for teachers lasts three days and a supplementary course for teacher trainers requires an additional two days.

Conference

The Pennsylvania Federation Council for Exceptional Children will hold its 22nd annual convention Thursday through Saturday, December 3-5 at the Holiday Inn in King of Prussia, PA. The theme of the convention is Pennsylvania's Focus on Critical Educational Concerns. For further information contact: Mrs. Nancy Anderson at the Montgomery County Intermediate Unit. Telephone: 215/539-8557.

Community Living Situations and Resident Satisfaction

Continuous emphasis on deinstitutionalization as a means of providing a more normal environment for the mentally handicapped in recent years has resulted in the increased use of community living arrangements. Limited research has been done, however, to determine what types of individuals belong in what type of community setting and what criteria determine a successful placement. This study investigated how such factors as environmental conditions, client satisfaction, and performance of functional living skills correspond with the ability of an individual to adjust to a normalized setting. One hundred fifty-three persons who had been released from a state school for the mentally retarded were involved in the study. The clients were well distributed in every age category over 18, and they were classified primarily as borderline to moderately retarded. Subjects were studied in regard to two measures of community residential adjustment. First, the Community Adjustment Scale, a measure of adaptive behavior, was used to assess how well the subjects had mastered community living skills, and how well they performed these skills independently. Second, by way of a structured interview, each client's satisfaction with aspects of the residential environment was examined. This interview looked in detail at the physical conditions of the residential placement, the amount of responsibility offered, the degree of autonomy, the social relationships developed, and the amount of association with the house staff. Data on each subject was collected and correlations were computed to explain the relationship between the measures of adaptive behavior and environmental characteristics. The data was also analyzed with respect to the type of residence each person lived in (foster home, group home, independent apartment, family home) at the time of research.

Results showed that in-house training was, by far, the most important factor influencing successful performance of skills in a community placement. When formal skill training was provided to the residents, the skills being taught were more likely to be transferred to other situations. The study also found that there was a positive relationship between a client's satisfaction with his or her living arrangement and the actual conditions of the setting. Clients were more satisfied when their houses were kept in good repair and clean, when the staff was supportive of their needs, and when they were given a greater degree of autonomy. The only investigated variable found to be independent of the residential environment was satisfaction with the social relationships that developed. The author concludes that the results of this study have implications for planners and providers of these services, but because of the correlational nature of the data, the findings need to be investigated further.

Seltzer, G. B. Community Residential Adjustment: The Relationship Among Environment, Performance, and Satisfaction. ***American Journal of Mental Deficiency***, May 1981, ***85***(6), pp. 624-630.

The **Florida International Diagnostic-Prescriptive Vocational Competency Profile** assesses vocational behaviors relevant to the work adjustment, job readiness and employability of educable and trainable mentally retarded adolescents and adults. The profile consists of 70 items that are categorized within six domains of vocational behavior: vocational self-help skills; social-emotional adjustment; work attitudes-responsibility; cognitive-learning ability; perceptual-motor skills; and general work habits. Each item contains five behaviorally based statements that describe different levels of vocational competency. Possible ratings range from level five (ready for placement in competitive employment) to level one (essentially unable to perform task). The test is of assistance in selecting vocational training programs, determining an individual's functional level of vocational competency, and monitoring vocational growth and development over a given period of time. In secondary school programs, the Profile can be of use in special education classes, work-study programs, resource rooms, vocational education classes, work evaluation units, and career education laboratories. At the post-secondary level, it can be used in sheltered workshops, work activities centers, rehabilitation facilities, adult education classes and vocational schools.

Stoelting, 1350 S. Kostner Ave., Chicago, IL 60623. 1979. Complete Set $22.50.

Cunningham, C., & Sloper, P. **Helping Your Exceptional Baby: A Practical and Honest Approach to Raising a Mentally Retarded Baby.** Pantheon Books, 201 E. 50th St., New York, NY 10022. 1980. $12.95. 336 pp. This book for the parents of handicapped children focuses on retarded children, and especially those with Down's Syndrome. The book is divided into three sections: you and your handicapped child; child development, stimulation, and teaching; and practical guidelines. The bulk of the book is devoted to illustrated, step-by-step instructions for teaching children basic skills.

Gold, M. W. **Did I Say That?: Articles and Commentary on the Try Another Way System.** Research Press, 2612 North Mattis Ave., Champaign, Il 61820. 1980. $15.95. 349 pp. This book is comprised of 26 articles written by the founder of the Try Another Way Program, Marc Gold. The articles range from pieces written when he was a graduate student to ones prepared after the program had been in use. The subject matter is varied and touches on many aspects of Gold's task analysis approach.

Halpern, J.; Sackett, K. L.; Binner, P. R., & Mohr, C. B. **The Myths of Deinstitutionalization: Policies for the Mentally Disabled.** Westview Press, 5500 Central Ave., Boulder, CO 80301. 1980. $18.50. 140 pp. This book reports on the results of a study of 300 deinstitutionalized persons undertaken by the authors. The book identifies and examines barriers to deinstitutionalization and looks at their impact on clients, staff, and the care-giving system as a whole. Recommendations are made for improving the deinstitutionalization process.

Jacobs, J. **Mental Retardation: A Phenomenological Approach.** Charles C Thomas Publishers, 301-327 E. Lawrence Ave., Springfield, IL 62617. 1980. $24.50. 223 pp. This book of readings is divided into five sections: clinical outlooks on mental retardation; competence among the retarded; the effects of mental retardation upon the family; the education of the retarded; and studies of the lives of the retarded in institutional settings. The chapters all take a nontraditional look at the lives of the retarded from unusual perspectives, rather than reporting on the findings of mainstream researchers.

Szymanski, L. S., & Tanguay, P. E. **Emotional Disorders of Mentally Retarded Persons.** University Park Press, 233 E. Redwood St., Baltimore, MD 21202. 1980. $18.95. 288 pp. This book of readings on the assessment and treatment of emotional disorders in mentally retarded persons is primarily directed to mental health professionals. It examines the nature of mental retardation and relates it to the assessment of emotional disorders, looks at the delivery of mental health services to this population, and explains the role of the mental health professional as a consultant to educational programs.

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The **I Can Do It! I Can Do It!** series for trainable mentally retarded students consists of three books which cover cooking, personal hygiene, and housekeeping. The I Can Do It Cookbook is an illustrated book with step-by-step recipes, photographed as they are prepared. The book also reviews kitchen skills, nutrition and utensil suggestions. The I Can Do It Housekeeping Hints book suggests ideas for developing a system for everyday cleaning in the home. Vacuuming, changing a lightbulb, decorating, money management, safety, and general maintenance of the home are introduced. The I Can Do It Personal Grooming and Hygiene book is designed for men, women, and children. Topics included in the book are daily grooming, body and skin care, clothing selection and coordination, elementary human anatomy, sexual hygiene, and birth control. All of the books are illustrated and designed to help students feel a sense of accomplishment.

H & H Publishing Company, 3475 Via Oporto, Suite 204, Newport Beach, CA 92663. 1981.

Cookbook $15.95; Housekeeping Hints $17.95; Personal Grooming and Physical Hygiene $19.95; I Can Do It Series $48.45.

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The Silhouettes of Gordon Vales tells the story of an artist who tears beautifully formed silhouettes from paper with his hands. As an infant, Gordon was placed in a facility for persons with mental handicaps. It was in this institutional setting that people became aware of his talents. At the age of 20, Gordon left the institution and went to live with a family on a farm where he was given a chance at a new life. Now, at the age of 45, he lives and cares for himself in his own apartment. Insights from an anthropologist, an historian, his foster family, a poet, and an author are all included in this film, which is narrated by Gordon himself. The film traces Gordon's history from institutional dependence to artistic and human freedom, and shows numerous examples of Gordon's unique artistic talent. Gordon's silhouettes are remarkably detailed, suggesting multiple dimensions in subject matter that range from portraits of real people to old cowboy folk heroes and fantasies of butterflies, flying horses, and airplanes.

16mm/color/sound/27 minutes/1980/$320.00

The Association for Retarded Citizens, N. 2927 Monroe, Spokane, WA 99205

PRISE is federally funded through the Pennsylvania Department of Education, Bureau of Special Education, Harrisburg, Pennsylvania. The local education agency sponsoring PRISE is the Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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PRISE reporter
issues and happenings in the education of the learning disabled
no. 13, december 1981

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BEYOND READING SKILLS: READING FOR MEANING

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The major academic difficulty noted among students with learning disabilities is reading. One study indicated that for 80 percent of the students in learning disabilities programs, problems in reading were the major concern. Moreover, one recent analysis of IEPs revealed that 63 percent of all handicapped students need special instruction in reading. The challenge of these reading needs is being met through several sources: the student IEP plans (P.L. 94-142), through criterion referenced approaches to instruction, and through other skills-oriented movements such as minimum competency testing. All of these approaches focus on the teaching of reading skills—skills that are observable and measurable. As a result, learning disabled students are profitably involved in the learning of subskills of reading, such as phonics skills, sight words, and specific comprehension skills.

Although the learning of reading subskills is a vitally important aspect of learning to read, teachers should not neglect another important facet of the reading program; that is, reading for meaning. Learning to read is enhanced by the learning of reading skills. The reading act, however, is much more than the sum of these skills. The student must be helped to view reading as a whole, meaningful process. We must ask ourselves: Do our students approach reading with excitement? Do they pick up books by themselves? Do they put themselves into the story? Unfortunately, research shows that many learning disabled students and poor readers approach reading in a rote, almost meaningless manner. In fact, some of our well-intentioned teaching practices may have had the unintended consequence of encouraging this poor attitude toward reading.

How do teaching practices act against reading for meaning? To begin with, poor readers simply do not read very much, even during the reading instruction period. Upon entering the first grade, learning disabled children are often placed in the low reading group. This group usually makes the slowest progress through the reading book and does the least amount of actual reading. Further, the chances for leaving this group and moving to a group that engages in more reading-for-meaning activities are slim.

Few poor readers do extra reading outside of schoolwork because they find reading to be an unappealing way to spend their time. During extra reading instruction time, such as that provided in a resource room, learning disabled students are likely to spend the bulk of their time learning specific reading skills, such as phonics and comprehension skills. Little time is spent actually reading. A not surprising, but very disturbing statistic shows that the number of book pages a learning disabled student reads per year is alarmingly low. Students cannot learn to read for meaning if they hardly read at all. In fact, we doubt that something that is practiced so little can be learned in any way.

If we look at teachers' actions during reading, we find that well-intentioned instructional practices may interfere with reading for meaning. For example, most children (as well as most adults) make some errors during oral reading. In general, people will correct those errors that change meaning, and shrug off those that don't. Rare is the adult who will correct "I saw a house" to "I saw the house." In fact, most adults wouldn't even notice the error since they would be too busy gaining the meaning of the passage. When teachers listen to the oral reading of good readers, they follow the same sensible procedure for correcting errors. When they listen to poorer readers, however, they suddenly change their behavior, correcting both errors that do and errors that do not disrupt meaning. Teachers correct practically all errors of poorer readers, while letting many errors of average readers slip by. The effect must be devastating. Imagine having each error, no matter how trivial, noticed and corrected!

How does all of this affect the learning disabled student's view of reading? Looked at from the student's perspective, reading is seen as something that he or she does badly, for about ten minutes per day, in a publicly embarassing situation. Reading may not be meaningful, but it must be perfect! Under such circumstances, who could read for meaning? How can we, as teachers and administrators, change this view of reading? There are several strategies that teachers can use to encourage a reading-for-meaning attitude.

First, encourage oral reading for meaning by not correcting every error. When an error such as the use of an incorrect word disrupts the meaning, and is worth noticing, the error should be pointed out and the student should be encouraged to reread the sentence and try to guess another word that would fit into the sentence. This procedure should also be used when a student stops reading upon reaching an unfamiliar word. Actually, time spent in trying to pronounce "Nebuchadnezzar" correctly only detracts from the meaning of a passage. One suggestion is that when readers encounter such words, they can simply say "blank."

Second, learning disabled children should read more. Sustained silent reading—time set aside for private, student-selected reading—may be far more useful than completing additional workbook pages. Or, materials for reading can be drawn from real life. Comics, cereal boxes, directions, menus, all contain reading that is done for a purpose. How many of these things can children find and bring in on their own? Language experience stories—dictated by children—often spark interest. A group of learning disabled high school boys sent their reading scores soaring with a language experience project on disasters, including "The Day the World Ended," and "The Roach." Stories were scripted and tape recorded with sound effects and music.

Third, students can predict the endings of stories they read in books. A procedure recommended by one expert is to look only at a picture (or title) first and make a prediction about the beginning of the story. Then the students read the first paragraph of the selection to see whether their predictions were correct. The students then make another prediction. This making and confirming of predictions about what will occur continues until the end of the story. This process encourages students to read with continued excitement and anticipation.

A final way to encourage reading for meaning is to build "schema," the background knowledge children bring to reading. We know that the more context we have for reading, the more meaning will be gained from it. Explaining background to reading material and relating it to children's experiences is an important step. Reading material that is related to other material, rather than changing topics each day, is another way of building up schema.

These strategies will help learning disabled students develop a reading-for-meaning attitude. When added to a firm grounding in skills instruction, reading for meaning is the impetus that triggers the spark that lights the fire of reading enthusiasm and achievement.

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Goodman, Y., & Burke, C. **Reading Strategies, Focus on Comprehension.** New York, N.Y.: Holt, Rinehart and Winston, 1980.

For prediction strategies see:

Stauffer, R. G. **Directing the Reading-Thinking Process.** New York, N.Y.: Harper and Row, 1975.

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National Diffusion Network

The following programs are available for adoption or adaptation through the National Diffusion Network (NDN). For further information on these or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (RISE), 725 Caley Road, King of Prussia, PA 19406. Telephone, 215/265-6056.

Child Study Center Pupil Services System

This pupil services delivery system uses a multidisciplinary approach to assist students with learning problems in achieving gains in intellectual performance, basic skills acquisition, and personal and social functioning. The center uses professionals from education, psychology, social work, speech pathology, and medicine to provide diagnostic, prescriptive, and consultative services to help children achieve success. The central ingredients for implementing the program are the exchange of information among and the active cooperation of the center, the school, the home, and community resources. Major activities of the center include conducting comprehensive studies of each child, developing composite diagnoses and prescriptions for remedial plans, verifying the validity of the diagnostic and prescriptive reports, and implementing the validated prescriptive plan. The Developmental Play and the Positive Alternative to Suspension programs are affiliates of this project.

The Communications Workshop (CWS)

This program is designed to improve the basic skills instruction afforded to learning disabled students in grades 7-12 by providing a curriculum that is structured, student centered and allows for student-teacher accountability. The program emphasizes reading as the focus of social studies and English, and thus imparts a reading emphasis to all content area instruction. The essential elements of the program are: a humanistic approach that creates a family-like setting which fosters personal pride and a positive response to the academic setting; an activity monitoring system that yields data on student selected activities; a program monitoring system that provides continuous feedback on student progress and difficulties; student motivation strategies that enhance positive attitudes; and intervention strategies that encourage student participation in their academic program and avoidance of unproductive activities.

PRISE INFORMATION DISSEMINATION SYSTEM

The 1981-82 PRISE Liaisons are listed below. If you wish to request information from PRISE, please contact the Liaison in your Intermediate Unit.

Special education private schools, state schools and hospitals, and other special education facilities should continue to contact PRISE directly.

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Chester County IU 24
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Beaver Valley IU 27
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Ms. Bethany Bosold
Arin IU 28
412/354-3111

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Schuylkill County IU 29
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[redacted]

Adaptive Behavior Assessment
The Weller-Strawser Scales of Adaptive Behavior (WSSAB) was developed to measure the adaptive behavior of learning disabled elementary and secondary students. Separate elementary (ages 6-12) and secondary (ages 13-18) scales provide an assessment of the severity of a pupil's adaptive behavior problems. A profile of mild to moderate or moderate to severe adaptive behavior problems is obtained in each of the four areas measured: social coping (how the student deals with environmental situations); relationships (how the student relates to others); pragmatic language (how the student uses language in social situations); and production (how the student behaves when producing work). The scales are intended for students previously assessed as learning disabled through traditional diagnostic methods. The examiner completes the WSSAB following a period of observation of the student. Recommendations for programming and environmental modifications are included for each profile obtained. These recommendations are beneficial in writing IEPs for academic, prevocational, and vocational placement. Reliability and validity data are found in the manual.

Academic Therapy Publications, 20 Commercial Blvd., Novato, CA 94947. 1981. Complete Set $27.00.

NEW PRISE SERVICE

Do you need to know the definition of an educational term? Are you trying to identify the publisher of a test? Looking for agencies and services for the learning disabled in a certain area? If so, we can help. INFO-SPEED is a new PRISE telephone service for obtaining quick response to everyday special education questions. Call 215/265-7321 and ask for INFO-SPEED. Your questions will be answered either immediately or by the next working day. INFO-SPEED can also be accessed through SpecialNet (User name: PRISE).

[redacted]

Taped Instructional Materials for Problem Readers
Regular classroom teachers are often asked to modify the course content for learning disabled students who have difficulty acquiring information from text books written at levels beyond their reading capabilities. One suggested method for accomplishing this is for teachers to provide information through auditory channels, thus bypassing students' reading disabilities. The purpose of this study was to investigate the effectiveness of listening, as an alternative to reading, in learning content area materials. Subjects were five dyslexic adolescent boys, attending grades 6 through 9, whose reading levels were four or more years below grade placement. The experiment was conducted in two phases. First, the students were asked to listen to passages from history and natural science materials at different grade levels, and then answer multiple choice questions to determine their levels of listening comprehension. Testing was halted when the subjects failed three or more passages at any given level. During the second stage, five passages were recorded and time altered—both compressed and expanded—via mechanical means. The time altered recordings were then presented to each subject using the same procedures as the previous stage. It was believed that time altered speech would enhance the subject's comprehension, since it would be possible for each one to take in information at his own rate of processing.

Analysis of the results suggests that listening is a viable alternative to reading for dyslexic students in learning content area materials. The subjects' listening comprehension performance indicated that they possessed adequate levels of general vocabulary and linguistic knowledge to comprehend short passages written at difficulty levels appropriate to individual grade placement. Results also showed that time altered speech does contribute to increased listening comprehension. Thus, learning disabled students can comprehend and learn complex information if their deficits in basic skills, such as reading, are avoided. In conclusion, the authors suggest that the development and use of taped materials might provide teachers with an additional technique for teaching content material to learning disabled students.

Sawyer, D., & Kosoff, T. Accommodating the Learning Needs of Reading Disabled Adolescents: A Language Processing Issue. *Learning Disability Quarterly*, Winter 1981, *4*(1), pp. 61-68.

[redacted]

Gaddes, W. H. **Learning Disabilities and Brain Function: A Neuropsychological Approach.** Springer-Verlag, 175 Fifth Ave., New York, NY 10010. 1980. 403 pp. $26.90. This book presents a multidisciplinary view of children with learning disorders by integrating neurological, psychological and educational research. The importance of neuropsychological knowledge in understanding and treating learning disabilities is demonstrated through case studies. School psychologists and teachers will find this book helpful. A glossary and an extensive bibliography are provided.

Hayes, R. P., & Stevenson, M. G. **Teaching the Emotionally Disturbed/Learning Disabled Child: A Practical Guide.** Acropolis Books, Ltd., 2400 17th St., Washington, DC 20009. 1980. 4 vs. $36.00. This is a four-volume handbook for professionals who work with both emotionally disturbed and learning disabled students in resource rooms, self-contained classrooms, noncategorical resource programs, and mainstreaming situations. It concentrates on children from primary through middle school. The four volumes include: Developing Behavior, Instructional and Affective Programs (Vol. 1); Assessment for Instruction (Vol. 2); Teacher-Made, Ready-To-Use Learning Activities and Games (Vol. 3); and Public Law 94-142: A Practical Guide for Teachers, Administrators, and Parents (Vol. 4).

Kleiman, G.; Humphrey, M., & Lindsay, P. H. **Microcomputers and Hyperactive Children,** *Creative Computing*, March 1981. 7(3), 93-94. This article reports on a pilot study conducted at a child development clinic in Canada which compared hyperactive children's performance on arithmetic problems administered by computer with problems given in a standard paper and pencil format. There were no differences between paper and pencil and computer work in the proportion correct, the average time to do the problems, or the average time between the problems. There was, however, a significant difference in the number of problems the children voluntarily chose to do in the two mediums. The children did almost twice as many problems on the computer than they did with paper and pencil.

Lerner, J. **Learning Disabilities: Theories, Diagnosis, and Teaching Strategies.** 3rd. ed. Houghton Mifflin Company, 2 Park St., Boston, MA 02107. 1981. 541 pp. $17.95. This book provides a broad view of the field of learning disabilities for teachers, school psychologists, administrators, language pathologists and counselors. The first part gives an overview; the second part presents a diagnostic-teaching process, followed by reviews of theories and teaching strategies that provide the basis for assessment and teaching decisions. The final chapters examine ways to provide educational services for the learning disabled student. This revision incorporates the impact of Public Law 94-142 and has been expanded to include preschool children, adolescents and adults. A list of useful reference material and sources is given.

Wise, B. K. **Teaching Materials for the Learning Disabled: A Selected List for Grades 6-12.** American Library Association, 50 E. Huron St., Chicago, IL 60611. 1980. 64 pp. $4.00. This annotated bibliography identifies materials in reading remediation, in academic fields and in avocational reading for teachers and librarians who work with learning disabled teenagers. The first section of the book is a list of professional materials which provide background knowledge about the disabilities of the students. The second section is a list of reading programs to be used by teachers for reading remediation. These chapters are followed by curricular and noncurricular materials arranged according to subjects. A list of publishers and an author-title index are included.

[redacted]

The **Skills for Independent Living Resource Kit** was developed for use in secondary level instructional programs addressing survival, daily living, or social and prevocational skills. It covers nine basic life skills domains: purchasing habits, budgeting, banking, job-related behavior, job search skills, home management, health care, hygiene and grooming, and functional signs. Although traditional academic skills are not the focus of this kit, they are emphasized when their expression is critical to the competent performance of life skills. Each of 37 Teacher Resource Files in the kit contains an overview statement, a main instructional objective, a suggested introductory lesson, a list of specific enabling objectives, a description of learning activities for each objective, and a glossary. The kit also contains a teacher's manual, supplementary student activity sheets, individual objectives mastery records, a continuous class progress monitoring log, and a resource materials guide which lists related, commercially available books, filmstrips, cassettes, kits, and games, complete with publishers' names and addresses, and price information.

CTB/McGraw Hill, Del Monte Research Park, Monterey, CA 93940. 1981. $90.00 per kit.

[redacted]

ASSET: A Social Skills Program for Adolescents is a series of eight 16mm films with accompanying leader's guide and participants' handouts, designed to help teenagers gain social interaction skills. Appropriate for use with young people with discipline, emotional and/or adjustment problems, the intent of the program is to provide students with the ability to control their own lives by showing them the importance of being able to treat others positively, taking criticism constructively and building effective interpersonal relationships with peers and adults. Instruction is provided in the following areas: giving positive feedback, giving negative feedback, accepting negative feedback, resisting peer pressure, problem solving, negotiating, following instructions, and conversation. A new skill is introduced in each of the eight sessions, and a strategy for accomplishing that skill is taught. Each film models real-life situations where at first the strategy is not used and then where it is demonstrated effectively. Students learn and practice the strategies through group discussions, verbal rehearsals, and role playing sessions.

Eight 16mm films/color/10 minutes ea./1981/$1,400
(Includes leader's guide and reproducible program materials)

Research Press, Box 317759, Champaign, IL 61820

PRISE is federally funded through the Pennsylvania Department of Education, Bureau of Special Education, Harrisburg, Pennsylvania. The local education agency sponsoring PRISE is the Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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PRISE reporter
issues and happenings in the
education of the emotionally disturbed
no. 13, february 1982

pennsylvania resources and information center for special education 1013 West Ninth Avenue, King of Prussia, Pa. 19406. 215/265-7321

ROBERT G. SCANLON–Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

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AN ALTERNATIVE TO CATEGORICAL PLACEMENT: A NEEDS APPROACH

Henry Reinert
University of Northern Colorado
Greeley, Colorado

In the early 1960s, educators in this country started what has grown to become a sizeable network of programs for emotionally disturbed or behaviorally disordered students. While this has been a gratifying development for those of us who have dedicated our professional lives to the education of children, it is not without a corresponding uneasiness with what has developed. We now have a system which, by concentrating all its intervention efforts on the primary handicap a student is labeled as having, fails to serve secondary handicaps adequately. This neglect of secondary problems is more than unfortunate, it is counterproductive in that unresolved secondary needs can hinder the efforts of educators to remediate primary handicaps.

In our work with emotionally disturbed students, a growing number of educators have become convinced that all students, whether labeled as handicapped or not, have affective needs that should be met by the educational system. It is also becoming evident that, although those labeled emotionally disturbed or behaviorally disordered are the only students who regularly receive planned affective programs, even these programs may be ineffective. The emotional and treatment needs of these students have no greater commonality than do the emotional needs of students who are labeled learning disabled or mentally retarded. Thus, we have developed a system that ignores the needs of those who are not labeled as being handicapped, while limiting our response to one area with those who are identified as being in need of special education.

In response to this dilemma some have suggested that we consider categorical approaches that will allow various mildly handicapped children to be placed together. This strategy has been questioned by cautious special educators who fear that noncategorical programs could lead to no programs. Consequently, special educators have been reluctant to consider this change. We have raised fears about possible funding cuts that could result from hasty changes to noncategorical programs, questioned whether students with various handicaps could be educated in the same classroom, and debated the implications of noncategorical education on certification within our states.

The labeling and placement debate has continued from the 1960s on through the advent of Public Law 94-142. The currently sluggish national economy and resultant belt tightening by state and local education agencies have brought us to the realization than we can no longer embrace an educational approach that is devoid of logic.

An alternative: A needs approach. One alternative that offers hope for teachers of the mildly handicapped is a *needs* approach. Rather than categorize students as emotionally disturbed, retarded or learning disabled, a needs approach identifies the unique needs of each youngster. Examples of needs that can be addressed by the educational system include:

the need to trust other people,
the need to feel important,
the need for consistency,
the need to relate to others,
the need for reinforcement,
the need to learn the basic arithmetic skills,
the need to identify beginning consonant sounds,
the need to develop job entry skills.

Some find it useful to describe needs as what they are not. Described this way, needs are not people, services, programs, or places. Therefore, a child does not need Mrs. Jones, speech therapy, the program for emotionally disturbed, or to be placed in a state hospital. If one is to identify the needs of students as an alternative to categorical placement, some meaningful grouping of needs must be developed. The following is a list of program components developed in Colorado for children who are identified as having severe emotional disorders. Each of these needs appears to be necessary for all youngsters; indeed its genesis is from normal childhood development.

Academic needs are the basis of schools and are the assumed reasons for their existence. Examples:

1. The need to learn the basic facts in arithmetic.
2. The need to develop correct letter formation.

Behavior management needs provide structured expectations for children along with reasonable consequences for change. The goal is always toward achieving an inner directedness and personal responsibility for behavior. Examples:

1. The need to sit quietly in one's seat during instruction.
2. The need to control one's impulses.

Affective education needs bring about the use of educational activities to promote growth toward mental health. Providing for affective needs is based on the assumption that education should provide for emotional as well as affective and psychomotor development. Examples:

1. The need to trust adults.
2. The need to relate effectively with peers.

Counseling needs provide for individual and group discussion to help students gain insight into their problems through supportive sharing activities. Examples:

1. The need to understand one's motivations for behaviors.
2. The need to value oneself as a person.

Environment needs encourage a systematic approach to viewing, evaluating, and interacting with one's environment in order to facilitate growth. Environment includes both the world within and outside the classroom. Examples:

1. The need to know one's home phone number.
2. The need to avoid being fooled by others.

Career/vocational needs include activities throughout a child's school life that promote career awareness, preparation, and experience. Examples:

1. The need to be aware of vocational opportunities within the community.
2. The need to get to school on time.

Strengths of a needs approach. Three strengths of a needs approach to education are evident in early programs. First, children are the recipients of programs designed to meet their individual needs. With a needs approach youngsters are not automatically grouped or labeled in a superficial manner which assumes that all emotionally disturbed children have common needs. For example, the 'normal' child who received little or no help under a categorical approach is more likely to receive help with a needs approach because the teacher is sensitized to the needs of all youngsters. Second, the model brings a heightened level of involvement to all teachers who suddenly find themselves contributors to children's needs instead of assembly line workers who repeatedly teach the same generalized programs. Third, parents could more easily become partners with school personnel in the development of their child. Involvement with professionals in a process designed to label and categorize their child has been a disastrous experience for many parents. The parent who is unable to relate to their child as retarded or emotionally disturbed might become a contributing partner with professionals in helping to identify the needs of their child if they were talking about meeting actual needs rather than the attaching of a label to their child. All parents want to help their needy children but few want to help identify them as handicapped.

Problems of a needs approach. A major concern of any attempt to use a needs approach is funding. Since many states assign funds to local agencies on the basis of categorical placement, this becomes a potential problem that must be studied by those considering this alternative. Solutions to this concern could include block funding to a district or continuing the current categorical funding with flexibility allowed in delivering services to children.

Another concern relates to college and university preprofessional training and certification. This concern presents not only a challenge for training institutions but an opportunity for growth through evaluation and redevelopment of current programs, an activity that could be beneficial to all of us in higher education.

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Benson, D. et al. **Guidelines Handbook for Educational and Related Services for SIEBD Students.** Colorado Department of Education. 1980.

Blackhurst, A. E. **Noncategorical Teacher Preparation: Problems and Promises.** *Exceptional Children*, November 1981. *48*(3). 197-205.

Reinert, H. R. **Children in Conflict: Educational Strategies.** St. Louis: Mosby Publishing Co. 2nd ed. 1980.

National Diffusion Network

The National Diffusion Network (NDN) is a nationwide system which helps local school districts improve their educational programs by making previously developed exemplary programs available for adoption or adaptation. As part of its system, the National Diffusion Network funds a number of State Facilitators who are responsible for helping interested school districts match their local needs with an NDN model program. These State Facilitators also provide the information, training and implementation assistance needed for local implementation. As an awareness service for Pennsylvania special educators, the **PRISE Reporter** will include brief descriptions of selected exemplary programs in the NDN System. The following paragraphs describe two of these programs relevant to educating emotionally disturbed students. For further information on these or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (R.I.S.E.), 725 Caley Road, King of Prussia, PA 19406. Telephone: 215/265-6056.

Positive Alternative to Student Suspension (PASS)

This is a program that provides intervention strategies that are designed to prevent or minimize nonproductive behavior by secondary students. The program's activities include individual and group consultations that assist school personnel in developing techniques for dealing with teenage students, affective education and personal development programs for students and teachers, time-out rooms managed by a teacher or paraprofessional where students talk out problems and complete academic assignments, individual and group counseling for students experiencing serious interpersonal confrontations, and counseling for parents. Two subparts of the program, staff development for a humanistic school and humanistic activities in the regular school, help students and teachers get to know each other. Two additional subparts, a student's school survival course and a home survival course, help students to learn how to deal more effectively with their environment.

RE-ED School of Kentucky

This is a short-term plan for the reeducation of emotionally disturbed/behaviorally disordered children in grades 1-6 who are engaging in disruptive behaviors. The objective is to help such children achieve just enough reorganization to allow them a higher probability of success than of failure in the regular classroom. The emphasis is on unlearning negative behavior patterns and learning positive ones. Meetings with parents are designed to encourage positive behaviors and management. Individualized academic and behavior change programs, based on problem identification and educational pretesting, are employed. Goal oriented records are kept for each child by a team composed of a liaison teacher/counselor, a day teacher, and the child's program specialist and educational specialist.

The **Behavior Rating Profile** (BRP) was designed to assess student behaviors in a range of settings and viewpoints. The test may be used to assist in the identification of students in grades 1-12 who are suspected of being emotionally disturbed, behaviorally disordered, or learning disabled. It may also be used to document the degree of perceived deviance, and to indicate the specific setting in which the student is viewed as deviant. The BRP is a standardized battery consisting of five checklists and one sociogram. Three of the checklists are completed by the student himself: the home scale, the school scale, and the peer scale. The teacher rating scale may be completed by a teacher or other member of the school staff who has close contact with the student being evaluated. The parent rating scale is completed by the child's parents or primary caretaker. The sociogram assesses peer perceptions of a targeted student. Since the six components of BRP are independent measures, each may be used alone or in combination with any of the other segments. The specific component which an examiner decides to use will depend upon the purpose of the evaluation. The results of the test will be of use to school personnel in planning academic and behavioral progress, in verifying referrals, in establishing goals for change, and in targeting behaviors of specific concern to parents, teachers and students. Reliability and validity data are included.

Pro Ed, 333 Perry Brooks Bldg., Austin, TX 78701. 1978. Complete kit $57.00.

[redacted]

Reality Therapy for the Emotionally Disturbed
Adequate and effective methods for the treatment of emotionally disturbed youth continue to pose questions for counselors, educators, and parents. The reality therapy model has been a frequently suggested alternative to more traditional approaches, but a survey of the literature has shown that it has not been widely implemented in various special education settings. The purpose of this study, therefore, was to evaluate the effectiveness of a reality therapy program with an institutionalized population that was both emotionally disturbed and mentally retarded. Subjects of the study were 20 adolescents between the ages of 13 and 21, whose retardation ranged from mild to profound. The major goals of the treatment program were to eliminate the maladaptive behaviors of the subjects, to develop their self-help skills, and to involve each individual in planning for deinstitutionalization. The project staff first received training in the use of reality therapy and learned methods for establishing rapport, dealing with present behavior, and planning for changed behavior. A checklist and test were then used to observe staff application of reality therapy principles and to measure staff understanding of the method. The treatment took place over a two-year period. In order to determine the effect of reality therapy, all subjects were administered the T.M.R. Performance Profile four times during the course of the experiment. In addition, the subjects' T.M.R. performance was compared to that of a control group of 19 individuals with similar but less severe problems.

Results indicated that 17 of the subjects increased adaptive behaviors and all decreased maladaptive behavior to the degree that they were placed in less restrictive environments than their prior placements. Although they remained superior to the experimental group, the comparison group's margin of superiority was reduced by the use of reality therapy. Participants in the experiment were also able to assume more independence and responsibility for daily living schedules and seemed to communicate more effectively. The authors concluded that the findings of this investigation do support the use of reality therapy with institutionalized emotionally disturbed and mentally retarded individuals.

Dolly, J. P., & Page, D. P. Reality Therapy With Institutionalized Emotionally Disturbed Mentally Retarded Adolescents. *Journal for Special Educators,* Spring 1981, *17*(3), pp. 225-232.

[redacted]

Gully, K. J. **Emotionally Disturbed Children: Their Adaptive Behaviors and Development in Residential Treatment.** *Child Study Journal,* Volume 11, No. 2, 1981. 91-97. This study examined the adaptive behavior of 21 emotionally disturbed children and how it changed over four months of residential treatment. Data on normal public school children were employed as a basis for comparison. The results showed that the adaptive behavior of the children in residential programs improved in the areas of language development, number/time concepts, vocational activity, self-direction, socialization, and violent, destructive and antisocial behaviors. Behaviors that did not change included withdrawal, unacceptable vocal behavior, hyperactive tendencies, psychological disturbances, and use of medication. Although the emotionally disturbed children decreased their antisocial behavior, they remained more antisocial than the normal children.

Hewett, F. M., & Taylor, F. D. **The Emotionally Disturbed Child in the Classroom: The Orchestration of Success.** Second Edition. Allyn and Bacon, Inc., 470 Atlantic Ave., Boston, MA 02210. 1980. 376 p. $16.95. This book presents the position that emotionally disturbed children are primarily children with learning problems that teachers can do something about, and only secondarily complex psychiatric casualties. The first two chapters serve as an introduction and define emotional disturbances and the roles teachers and children play. The remainder of the book is deed oriented and presents information on functionally describing emotionally disturbed children, conceptualizing emotionally disturbed behavior, preparing an IEP, increasing the children's level of competence, designing a classroom, special programs, severely disturbed children, and working with parents. The orientation of the book is behavioral-educational with a concern for the attitudes, feelings and self-concepts of the children.

Samuels, S. **Disturbed Exceptional Children.** Human Sciences Press, 72 Fifth Ave., New York, NY 10011. 1981. 366 p. $26.95. This book is a guide to the emotional needs and problems of handicapped and gifted students. Chapter 1 discusses normal child development and some specific problems of exceptional children with emphasis on the interrelationship of physical, cognitive, and emotional development. Chapters 2 and 3 define and describe the various forms of emotional disturbances. In Chapters 4 and 5 the specific conditions and possible emotional reactions to them are discussed. Considered are problems of children with physical, neurological, medical, hearing, vision, and speech disorders, mental retardation, learning disabilities, multiple handicaps and giftedness. Chapter 6 considers assessment and the development of a treatment plan. Among the topics covered are standardized testing, screening, diagnosis, and labeling. Three final chapters are concerned with implementation of the treatment plan. Chapter 7 reviews various kinds of psychotherapy including play, art, and behavior therapy and information on drugs. School interventions such as kinds of placement, early childhood intervention, and school-parent interaction are covered in Chapter 8. Chapter 9 addresses behavior modification, psychodynamic, ecological, and psychoeducational strategies.

Swain, C. H. **For Survival and Beyond: Providing Support for Teachers of Emotionally Handicapped Students.** Paper presented at the CEC Convention, New York, NY, April 1981; 8 p. (Available from: ERIC Document Reproduction Service, P.O. Box 190, Arlington, VA 22210. ERIC No. 204946. Cost: Microfiche $0.91, hardcopy $2.00 plus postage). The author mentions findings of research on teacher morale, and points out supportive roles which school personnel can perform in helping teachers of emotionally disturbed students. Among the supportive settings listed are informal conversations, supervisory conferences, staff meetings, and inservice training sessions. Eight supportive roles which fellow teachers, building principals and others can play are: the highway paver (who handles administrative details efficiently and competently), the consistency provider (who deals with behavior management), the anger director (who helps the teacher identify sources and targets of her own anger), the perspective lender (who helps the teacher in determining the importance of a situation), the assurer and critiquer (who helps when the teacher is going through a period of self-doubt), the alternative generator (who offers a repertoire of possible interventions), the curriculum enthusiast (who assists in new product areas), and the self (who is the teacher who can find supporters and try not to take criticism personally).

Wood, M. W. **Developmental Therapy Sourcebook, Volume 1: Music, Movement and Physical Skills; Volume 2: Fantasy and Make-Believe.** University Park Press, 233 East Redwood St., Baltimore, MD 21202. 1981. 187 p. (Vol. 1); 238 p. (Vol. 2). $19.95 each. These books provide an introduction to and instruction on how to use the developmental therapy approach to educating emotionally disturbed students. This approach tries to promote social and emotional growth by identifying the unique ways in which children try to produce conditions that are more personally satisfying than existing ones. Volume 1 gives an orientation to developmental therapy plus instructions on how to use it in conjunction with play, music, body movement, games, and crafts. Volume 2 includes instructions for using fantasy to reduce anxiety through puppets, stories, role playing, and dramatics.

[redacted]

Rules At School... And Other Places is a multimedia kit designed to teach students in grades K-3 how to obey rules and act appropriately in a variety of social situations. Using songs, stories and cartoon characters, four color-sound filmstrips stress the value of rules, how different rules apply to different situations, and the specific behaviors that are correct in classroom situations, visits to other peoples' homes, and school outings. Each of the four lessons is built around a filmstrip presentation with materials on duplicating masters providing reinforcement exercises. These exercises can be completed independently or can be done orally as a class activity. A teacher's guide contains full plans including key concepts, objectives, discussion questions, activity suggestions and song lyrics for each lesson.

Listen and Learn Co., 13378 Pescadero Rd., La Honda, CA 94020. 1981. $83.00.

[redacted]

You Have to Start So Small To Even Make an Inch... is a film that describes the Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH) program sponsored by the University of North Carolina at Chapel Hill. Begun in 1966, the philosophy of the program is that parents are the key to an autistic child's improvement and, therefore, parents are trained to be major change agents in this therapy approach. The film documents the diagnostic process used for placement of the child, the development of the plan for therapy and the training of parents for home instruction. A cross section of TEACCH classes located throughout North Carolina are depicted and instructional approaches used to teach communication, self-help and vocational skills are demonstrated. The role of the parents as teacher aides is also described.

16mm/color/sound/30 minutes/1980/$300.00

University of North Carolina at Chapel Hill Medical School, Wing B, Division TEACCH, Chapel Hill, NC 27514

PRISE is federally funded through the Pennsylvania Department of Education, Bureau of Special Education, Harrisburg, Pennsylvania. The local education agency sponsoring PRISE is the Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN–Chief,
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LOW VISION AIDS AND VISION REHABILITATION

Claire Eagan
Pennsylvania College of Optometry

Any kind of learning is best attempted at an early age. For this reason, children who are congenitally visually impaired have an easier time compensating for their handicap because they learn early in life to rely more heavily on their other senses. For those who become visually impaired later in life, however, learning to accommodate for vision deficiency is a difficult problem. For low vision students, reading material from the school blackboard, working in the library, or responding to any of a variety of educational situations becomes a monumental task. A number of advances have been made in recent years to improve the educational outlook for partially sighted students, but, even in our technology-oriented society, the answer to low vision problems still all too often is--"There is nothing more we can do."

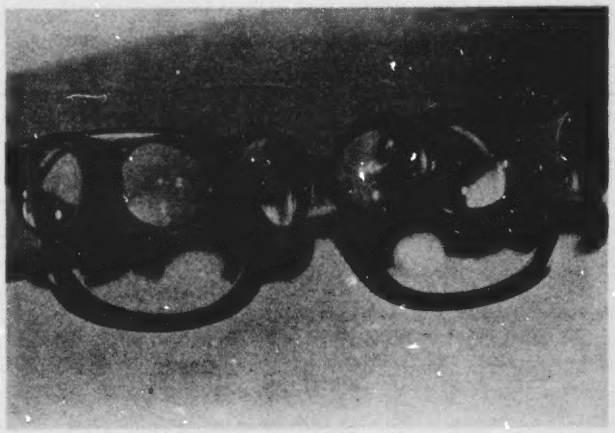
This common response comes from both optometrists and ophthalmologists who tend to view the low vision patient as a lost cause, too frustrating to work painstakingly with, only to gain a slight visual improvement. But with the increased recognition of the problems of the partially sighted, and the formation of organizations such as the Council of Citizens with Low Vision, public attention is being focused on the needs of this population. New low vision aids are being developed to enhance the residual vision of the vision impaired, and new intervention strategies are being used to enable this population to participate more fully in life.

In the nation today there are just a few centers dealing specifically with the rehabilitation of low vision patients. The William Feinbloom Vision Rehabilitation Center at the Eye Institute of the Pennsylvania College of Optometry is one of these centers. The center is named for optometric scientist Dr. William Feinbloom who developed many of the optical aids used by low vision patients.

Dr. Richard L. Brilliant, Chief of the Feinbloom Center and an associate of Dr. Feinbloom, works daily with the visually impaired of all ages in an effort to maximize their residual vision. He says that over the years the concept of vision rehabilitation has changed dramatically. Now, instead of simply prescribing glasses, vision rehabilitation professionals operate in multidisciplinary teams to evaluate the specific vision problems and needs of each person, and then work in concert for maximum vision improvement.

At the Center, treatment begins with an intake interview with a counselor who–since vision rehabilitation often involves the use of devices that enhance vision in specific situations–determines the exact vision problems the client is seeking to correct. Then educational, medical, and mobility instructors determine whether these results are attainable using low vision aids and other treatments. After a plan has been formulated, the patient is fitted with a low vision aid and given mobility instruction.

Lenses available to low vision patients vary widely, from ordinary prescription and special reading lenses to sophisticated camera lens bioptics and the recently introduced Honey Bee Lens. Camera lenses and Honey Bee Lenses attach to and extend from the upper portion of eyeglasses like miniature telescopes and provide high magnification.



Honey Bee Lenses attached to regular glasses

When Dr. Feinbloom first introduced his bioptics many years ago, they were relatively simple but they enabled partially sighted persons to read or perform daily tasks. Then came camera lens, bifocal glasses, developed at the Feinbloom Center five years ago. This supplementary lens provided large amounts of magnification for distance viewing when a person looks through the top portion of his or her spectacles or, when reading caps have been attached, extra magnification for close-up work. The lower portion of the lenses contain the patient's normal lens prescription.

Camera lenses have a tremendous track record with low vision patients and they are now used throughout the country.

One shortcoming of these lenses, however, is that while they provide the magnification required, they reduce the field of vision as they magnify. Drs. Feinbloom and Brilliant both felt that improvements could be made, particularly in seeking greater peripheral vision. After years of research and refinement, the doctors at the Feinbloom Center introduced in October 1981 the Honey Bee Lens which affords peripheral as well as straight ahead vision.

Patterned on the visual system of the honey bee, this lens is composed of three tiny telescopes mounted on each lens on the upper portion of bifocal spectacles. While the telescopes on each lens point to the left, the right, and straight ahead, the lenses work in harmony to provide the wearer with a single, wide-angle view that, except for its magnification, is similar to what a normally sighted person sees.

Legally blind and partially sighted persons, whether adults or children, should not immediately assume that one particular low vision aid is suited for them because of its success for someone else. Each case must be thoroughly evaluated on its own merits and a decision on the prescription made, based on that individual's situation and needs.

Obviously, the degree of success in vision rehabilitation is related directly to the patient's visual condition when he or she first comes to the Center. It is also determined by a variety of other factors, among them the measured residual vision, physical condition, and attitude of the patient. The latter cannot be overemphasized.

Motivation often can surmount other problems in helping a patient to rehabilitate deteriorating vision and maximize residual vision. Since special lenses can make a person look unusual, and since they require some effort on the part of the patient to adapt to them, these devices require a commitment from the user. Yet, vast improvements have been documented in patients of all ages when they were determined to succeed with the bioptic. This motivation, combined with the program of orientation and mobility training, has spelled the difference between success and failure in vision rehabilitation.

The first patient for whom the Honey Bee was prescribed at the Feinbloom Center was a 17-year-old college freshman who is legally blind, and who needed help to see the blackboard at school, and for watching outdoor activities. The young man worked hard at using Honey Bee Lenses and has done well with them.

The Feinbloom staff has found through experience that patients' visual abilities are different in the clinical—where lighting and other factors are ideal—and the functional setting. For this reason one lens may work well in the clinic yet not work as well in the real world of the patient's daily life. The patient's everyday needs, therefore, must be the paramount consideration in prescribing aids and rehabilitation vision.

Because work with low vision patients is an exacting science, requiring a good deal of patience and effort, patients spend more time at the Center than they would visiting an eye doctor's office. Feinbloom patients fall into two categories: the daily patients, mostly localites or residing close to Philadelphia, who can commute daily for their rehabilitation and training, and those who live at a distance and who stay in the area for a four-day period.

The low vision patient's contact with the Center does not end with his or her departure with new bioptics. The personnel at the Center maintain regular contact with all patients to ascertain that they are progressing well with the prescribed aids. Many patients return periodically for checks and former patients are always advised when a new development is made which could enhance their visual abilities.

[redacted]

Tactile Display Scanning and Memory

A primary purpose of maps is to convey information about space and spatial relationships. Research has demonstrated that many visually handicapped persons have been able to complete an unfamiliar route with the aid of a tactile map that provides relevant information. The purpose of this study was to determine whether specific training in scanning tactile displays would enable blind students to more effectively remember the spatial relationships presented. Subjects were 36 students (grades 4 to 12) enrolled in a residential school for the blind who used braille as their primary source of reading. They were divided into two groups: an experimental group that was taught to systematically search a display using a vertical scanning technique, and a control group that received no training. After instruction was completed with the experimental group, all subjects were individually asked to inspect a tactual display consisting of nine removable symbols and to remember the location of these parts. The training group was reminded to scan using the vertical search technique they had learned. The nine symbols were then removed and the students were told to replace the parts in their correct location. After three practice trials, the number correctly placed was recorded and converted to scores. These data were then used in a three-way analysis of variance in order to compare three grade groupings (4 to 6, 7 to 9, and 10 to 12) and the two conditions of control versus training.

Results of the experiment showed that the students in the lower grade levels benefited most from the training and were superior to the control group in the same grades. Training students to scan a display, however, interfered with performance at the upper grade (10 to 12) levels and resulted in more errors, with the control group performing better than the experimental group. The author concludes from these findings that training in tactual and spatial concepts should be done early before strong habits and conceptual schemes have been established.

Berla, E. P. Tactile Scanning and Memory for a Spatial Display by Blind Students. *Journal of Special Education*, Fall 1981, *15*(3), pp. 341-350.

[redacted]

The **Developmental Activities Screening Inventory** (DASI) is an individualized, informal screening measure designed for the early detection of developmental disabilities. This test can be used with visually impaired children, and appropriate adaptations for administration are specified in the instructor's guide. The DASI contains 55 test items in 9 developmental levels ranging from a functional age of 6 to 60 months. The developmental skills assessed include: fine-motor coordination, cause-effect and means-end relationship, number concepts, size discrimination, and seriation. The test items may be presented in various sequences and in one or two sittings. The DASI can be administered easily by classroom teachers with a minimum of testing experience and the instructions can be given either visually or verbally. The instructor's guide includes suggestions for teaching the concepts assessed in the DASI. Thus, an instructional program can be formulated from an analysis of the failed items. Reliability and validity data are also included in the instructor's guide.

Teaching Resources, 50 Pond Park Rd., Hingham, MA 02043. 1977. Complete Set. $76.00.

National Diffusion Network
The following programs, although not specifically designed for visually impaired students, are applicable to them and they are available for adoption or adaptation through the National Diffusion Network (NDN). For further information on these or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (RISE), 725 Caley Rd., King of Prussia, PA 19406. Telephone: 215/265-6056.

Multiagency Preschool Project
The Multiagency Project for Preschoolers (MAPPS) is an intervention program for preschool handicapped children and their parents who live in remote areas, where professionals who are trained in working with the handicapped are often lacking. The program makes it possible for parents to act as intervention agents for their own handicapped children, ages birth through 3, by providing them with a detailed and specific curriculum, by training them in its use, and by providing weekly monitoring. For handicapped children ages 3-5, the program makes use of existing preschool and community day care services by providing curriculum materials and training for parents and teachers alike. The heart of the program is the curriculum and monitoring system that covers five areas: receptive language, expressive language, motor development, self-help development, and social-emotional development. The system includes five sequenced instructional programs, an instruction manual, student testing materials, and an introductory slide-tape presentation. The program is based on behavioral principles and programmed instruction.

Saturday School
This parent-child early education program is designed to increase the later chances of children, ages birth to four, for success in school. The special concern of this program is locating, testing, and treating children with handicaps by providing resources that parents can use to act as their children's principal teachers in their own homes. For infants, the program provides parents with easy-to-do, age-sequenced learning activities that encourage maximum visual, motor, and language development. Children are tested at age three and, if any problems are identified, the program provides specialists who visit the home weekly to provide instruction to the parents in how to work with the handicap. At age four children begin Saturday School which consists of four major components: testing, diagnosis, and follow-up in language, motor, perception, general knowledge, hearing, and vision; a three-hour school day on Saturday in which even the most severely handicapped children are mainstreamed in group activities for language, math, motor, art, auditory, or visual discrimination; weekly one-hour home visits in which teachers or specialists visit groups of three or four children in their neighborhood; and home teaching through the week by parents, using materials provided by the program.

Cook-Clampert, D. **The Development of Self-Concept in Blind Children.** *Journal of Visual Impairment and Blindness,* June 1981, *75*(6), 233-238. This article examines the significance of, and methods by which blind children develop their self-concepts, and compares these factors with the same processes in normally sighted children. The author uses three types of data: classic theories of the definition and determinants of self-esteem, data based studies of self-concept, and descriptive research on the topic. The article concludes with suggestions for promoting the development of self-esteem in blind children.

Hineck, J. **Sighted Children Can Learn About Blindness and Visual Impairments.** *Education of the Visually Handicapped,* Summer 1981, *13*(2), 58-62. This article describes two programs that teachers of the visually impaired can use to help regular education teachers and their students to learn more about visually impaired students and their needs in school. The first program involves teaching sighted students to read and write in braille. The second program is a 14-week session intended to teach a class of fifth graders about blindness. The article recounts the activities that are used in each session and contains a pretest that can be administered to the class to ascertain their knowledge of vision impairments and the visually impaired.

Inana, M. **Essential Components of Vocational Counseling With Visually Impaired Students.** *The Journal for Vocational Special Needs Education,* Winter 1981, *3*(2), 7-9. This article addresses what the author calls the five essential components of vocational guidance that should be of concern to vocational counselors who work with visually impaired students. These concerns are: lack of exposure to the world of work, increased importance of developing job awareness skills, lack of information about the types of jobs visually impaired students can do, lack of emphasis on daily living skills, and lack of knowledge regarding resources available to help students. The article defines visual impairments, examines the psychological consequences of the impairment, and then discusses the five essential components for counselors.

Kersten, F. **Music as Therapy for the Visually Impaired.** *Music Educators Journal,* March 1981, *67*(7), 63-65. This article highlights the ways in which music can be used to improve the development and lives of the vision impaired. Topics covered include: the use of music and music coordinated activities to assist the psychomotor development of young children; music as a means of venting frustration and avoiding the development of mannerisms, music for relaxation, and playing music and attending musical events as methods for interaction with the sighted. Also includes a brief description of nine sources for musically oriented materials for the visually impaired.

Ward, M., & McCormick, S. **Reading Instruction for Blind and Low Vision Children in the Regular Classroom.** *The Reading Teacher,* January 1981, *34*(4), 434-444. Intended for regular education reading teachers, this article may be useful to those who work as consultants to such teachers. The article defines the categories of visual handicaps; gives general information on teaching reading to the visually impaired—including the role of the consultant, approaches to reading instruction, materials, prerequisites for learning to read, and assignments, tests and grades; and lists specific suggestions for teaching reading to both low vision and blind students.

Welsh, R. L., & Blasch, B. B., eds. **Foundations of Orientation and Mobility.** American Foundation for the Blind, 15 W. 16th St., New York, NY 10011. 1980. 672 p. $18.00. This book is a compilation of individually authored chapters that provides a state of the art review of orientation and mobility instruction. The first few chapters discuss the development of psychomotor and spatial orientation skills and how they relate to the ability for independent movement by those with reduced vision. Three chapters are devoted to the sensing systems the visually impaired person uses to receive and process information from the environment. Other chapters cover such topics as: the impact of psychosocial factors on orientation and mobility instruction, the variety of aids and equipment available, the special needs of vision impaired children and older clients, the effect of environmental variables on learning, and the educational and administrative procedures necessary for a high quality mobility program.

Willoughby, D. M. **A Resource Guide for Parents and Educators of Blind Children.** National Federation of the Blind, 1800 Johnson St., Baltimore, MD 21230. 142 p. 1979. $5.95. This is a book of general information that provides practical information on raising a blind child to assist parents or educators who have no previous experience with teaching vision impaired students. Based on personal experiences, the author suggests approaches and provides anecdotal information in order to help the normal development of social, cognitive, daily living, and play skills. Special emphasis is given to such sensitive areas as how to tell children about their handicap, how to help them establish friendships, and how to deal with the attitudes of others. Advice is provided on how to obtain appropriate educational services and how to assist in the early development of orientation and mobility skills.

[redacted]

The **Peabody Mobility Kit for Sighted and Low Vision Persons** is a training kit for programmed instruction in orientation and mobility for multiply handicapped low vision students functioning between the ages of 2 to 6 years. An assessment component is designed to evaluate motor and concept development, vision, and mobility skills. Training manuals in these four areas provide procedural sequences, instructions for prompting and rewarding, evaluation procedures, and guidelines for advancing to or retracing instruction steps. Activities are developmental; each is divided into three levels of presentation and criterion. Emphasis is on utilization of client's residual vision. Teaching materials may either be teacher-made or purchased separately. A similar kit is available for teaching mobility and orientation skills to blind multiply handicapped students.

Stoelting Co., 1350 S. Kostner Ave., Chicago, IL 60623. 1981. $120.00.

[redacted]

Special Education Technique: Lab Science and Art is a film that shows how science and art programs that feature a multisensory approach can be used in tandem to enhance the visually impaired child's understanding of the physical world. This film depicts the design and operation of two programs for intermediate level, visually impaired students: a basic science and art program and an advanced one. In the former, students learn about gases by mixing baking soda and vinegar in a flask and then attaching a balloon to its opening. As the materials interact and give off a gas, the students can feel the resultant inflation of the balloon. In the corresponding art lesson, students create bubble sculptures from soap suds and learn about the formation of bubbles during the production of gases. In a biology lesson, the students handle chicks to discover their anatomy and then recreate the animals using styrofoam, construction paper, pipe cleaners, and feathers. In the advanced program students develop manipulative and conceptual skills by exploring energy, light, and sound. The experiments include the use of insulators with ice cubes, measuring the effect of hormones on plant growth, and learning about light and heat with an instrument that responds to varying amounts of light with a loud or soft sound. Throughout the film the viewer is introduced to the concept of inquiry and discovery using ears, noses, hands, and, whenever possible, eyes.

16mm/color/sound/24 minutes/1979/$375.00

McGraw-Hill Films, 110 Fifth Street, Del Mar, CA 92014.

PRISE is federally funded through the Pennsylvania Department of Education, Bureau of Special Education, Harrisburg, Pennsylvania. The local education agency sponsoring PRISE is the Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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issues and happenings in the
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no. 13, april 1982

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ROBERT G. SCANLON—Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN—Chief,
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PSYCHOLOGICAL EVALUATION OF PHYSICALLY HANDICAPPED STUDENTS

Harold D. Love, Ed.D.
Chairman, Special Education Department
University of Central Arkansas

The rehabilitation of physically impaired students has increasingly concerned psychologists and educators during the past decade. The appropriateness and quality of the services these students receive are as important as the number of individuals receiving these services, if true rehabilitation is to occur. In planning programs for this population, it must be remembered that while physical disabilities handicap an individual, poor self-concepts that sometimes accompany these disabilities can be as crippling as the handicap itself. Too, physical handicaps are often medical problems that prove to be psychological and educational barriers as well. These complexities mean that if physically handicapped students are to be rehabilitated, their educational programming must stem from psychological and educational testing that allows for these perplexities, and is therefore valid.

All testing with the physically handicapped must take into consideration the individual's ability to see, speak, hear, write, or otherwise respond to directions. The severity of the disablement influences test results; therefore, the examiner must be well versed in the performance of the nonhandicapped on identical tests. The selection of suitable tests is determined by the examiner in instances where speech and motor dexterity are present. The subject's verbal comprehension may influence the selecting of a test. Modifications in administering standard tests become necessary when the more than moderately physically involved individual is present.

When discussing the psychological evaluation of children with physical handicaps, it must be noted at once that this group is large and has commonly divergent characteristics. The causes of handicaps are many, and the results vary according to the cause. The primary concern in evaluating these children is that tests and measurements are set up for and standardized on a group of children representing the normal curve. Because handicapped children undeniably have physical problems, in many cases (particularly with such problems as cerebral palsy), at least a chance of neurological impairment exists.

One of the greatest problems when testing handicapped children and interpreting the results is that one cannot be sure whether a low score on an intelligence test is a result of low intelligence, poor reading ability because of the child's handicap, or sensory defects which accompany the physical handicap. If the child is being treated with anticonvulsant drugs, this may be a distorting factor in his or her test performance. It is also important to remember that perceptual and spatial disabilities occur frequently in certain kinds of cerebral palsy, and that these are not necessarily reflective of overall intellectual level.

Few individual intelligence tests can or should be administered by classroom teachers. One of the basic assumptions underlying psychoeducational assessment is that, because of their complexity, the person who uses tests is adequately trained to administer, score, and interpret them. Such tests should be used only by licensed or certified psychologists, who have specific training in their use.

Individually administered intelligence tests are most frequently used for making educational placement decisions. State special education standards typically specify that data about intellectual functioning must be included in placement decisions and that these data must come from individual intellectual evaluation by a certified psychologist.

Many physically handicapped children have additional handicaps (for example, blindness, deafness, or perceptual problems) that interfere with their ability to respond to traditional general intelligence tests. This fact has led several test authors to develop individually administered tests designed to assess the intelligence of physically handicapped and multiply handicapped persons.

The author believes that if a physically handicapped student has moderate to severe hands and arms involvement, the best assessment of intelligence would be the Verbal Section of the Wechsler Preschool and Primary Scale of Intelligence (WPPSI), copyrighted in 1963 and 1967; the Verbal Section of the Wechsler Intelligence Scale for Children—Revised (WISC-R), copyrighted in 1974; or, the Verbal Section of the Wechsler Adult Intelligence Sale—Revised (WAIS-R), copyrighted in 1981. If the student does not have a hand involvement and his or her speech is relatively clear, the Verbal and Performance Sections of all three of these tests can be administered. The WPPSI can be administered to children from 3 years, 10 months and 16 days to 6 years, 7 months and 15 days of age. The WISC-R can be administered to children 6 years, 0 months to 16 years, 11 months and 30 days of age. The WAIS-R can be administered to individuals ranging in age from 16 through 74.

The Stanford-Binet Intelligence Scale is the grandfather of all intelligence tests. The original scales were developed by Alfred Binet in 1905 in collaboration with Theodore Simon. In 1908 the scale was revised by grouping items according to age, and the concept of mental age was introduced. The Binet-Simon Scale was revised in 1911, and in 1916 Lewis Terman revised and extended the scale for use in the United States. The 1972 edition of the Stanford-Binet is the third revision of the test and was developed by renorming the 1960 edition.

The Stanford-Binet can be used with physically handicapped children who have motor limitations to the same extent that the Wechsler series can be used. There are verbal subtests and performance subtests; however, the test is not broken down into a verbal section and a performance section. Therefore, the examiner must be careful in selecting the subtests administered to a physically handicapped child. The author believes that the Wechsler scale is more adaptable for evaluation of the physically handicapped than is the Binet.

The Slosson Intelligence Test (SIT), published in 1971, is a relatively short screening test designed to evaluate mental ability. The SIT is a Binet-type scale that includes many items that appear in the Stanford-Binet Intelligence Scale. Since it does not require interpretation by the examiner, this test can be administered by teachers, counselors, or psychologists with the assistance of a second professional who knows the child extremely well. The administrator of the test uses the person who knows the child extremely well to answer most of the questions for the child. Therefore, a mental age can be obtained for a physically handicapped child, even though he or she has limited or no speech and has severe motor involvement.

While age ranges for individuals who may be tested are not specified, Slosson items range from the 5-month to the 27-year level. Although the test was standardized on an unspecified sample, and information about its technical adequacy is limited, it does provide a broad sample of behaviors and can be valuable in screening physically handicapped children for more in-depth psychological evaluations.

Another test that can be used to screen physically handicapped children is the Goodenough-Harris Drawing Test. If this psychological tool is used, the child must have adequate use of the dominant or both hands. This test can be used with children ranging in age from 3 to 15 years. It is a nonverbal test of mental ability suitable for use as either a group or individual test. Dr. Dale Harris restandardized the Goodenough Draw-A-Man Test and also standardized a similar Draw-A-Woman scale. At the present time there is an experimental self-drawing scale being studied. It should be mentioned again that this test which takes between 5 and 15 minutes should be used only for referring physically handicapped children for additional psychological testing.

There are a number of picture vocabulary tests that use receptive vocabulary as a means of assessing children's intelligence. Almost all of these can be modified to test the vocabulary knowledge of physically handicapped children. The tests are not measures of global intelligence, rather they measure only one aspect of intelligence: receptive vocabulary. There is, however, a high correlation between vocabulary knowledge and general intelligence. These tests should not be used to make placement decisions except when the results are corroborated by other psychological tools that measure more than one aspect of intelligence. Although there are many such tests (Full Range Picture Vocabulary Test, Quick Test), the author prefers the most up-to-date picture vocabulary test, i.e., the Peabody Picture Vocabulary Test—Revised (PPVT-R), which was published in 1981.

The PPVT-R can be administered to a child who is able to point to a picture, touch a picture, or in some way communicate to the examiner or a third individual which picture represents the word. While four pictures are shown to the child, the examiner pronounces a word and the child points to or touches one of the pictures. The mental age is obtained in the revised Peabody and there is an age equivalent which correlates with the mental age, and also a standard age equivalency which correlates with the intelligence quotient.

One of the author's students devised an instrument that was a board divided into four parts with a light in each part. When the four pictures were presented to the physically handicapped student, he or she could touch the section of the board that represented the word. When this particular section was touched, a light would come on indicating the numbers 1, 2, 3 or 4. The board could fit on a wheelchair, be placed on a table, or put on the floor. The child could touch the four sections of the board with his or her finger, hand, elbow, chin, head, feet, or toes.

The author has mentioned many tests that could be adapted for the physically handicapped student, but one must always realize that adaptations must take place. The author would prefer, however, to utilize the Peabody Picture Vocabulary Test—Revised as a screening device, and follow this with the Full Scale Score of one of the Wechsler tests or the verbal sections of one of the Wechsler tests. In his opinion, this would be the best method for obtaining the intelligence quotient of the physically handicapped student. Other tests mentioned in this article would help in the psychological writeup and in the assessment of the child who is handicapped by physical limitations.

DISSEMINATION HAPPENINGS

National Diffusion Network
The following program is available for adoption or adaptation through the National Diffusion Network (NDN). For further information on this or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (RISE), 725 Caley Road, King of Prussia, PA 19406. Telephone: 215/265-6056.

Comprehensive Training Program for Infant and Young Cerebral Palsied Children
This program serves children three years of age or younger with a primary disability of a moderate to severe neuromotor handicap with physical impairment severe enough to limit motor activity. The children admitted to the program exhibit feeding, speech, and/or language problems. The focus of the project is on a preschool program and a language stimulation program. Services offered include: physical therapy, nutrition, psychological counseling, speech pathology, occupational therapy, special education, social services, and medical care. Parents take an active part in their children's therapy programs, and they are involved in individual and group conferences with project social workers.

RESEARCH BRIEF

Regular Education Teachers' Perceptions of the Handicapped
As the mainstreaming movement gains acceptance as an alternative to segregation in special classes, teachers' perceptions of handicapped children and their anxieties toward mainstreaming become increasingly important to evaluate. The purpose of this study was to identify the misconceptions and actual concerns of regular classroom teachers when physically handicapped students are placed in their programs. Subjects were 78 teachers employed by a rural school system in Georgia. One group, comprised of 46 regular classroom teachers who had never interacted with physically handicapped students, were administered a questionnaire listing ten potential problem areas. A second group, consisting of 32 regular classroom teachers with some experience in teaching physically handicapped children, were administered a similar questionnaire. Results of the two surveys were then compared using a Chi Square technique to determine whether continued interaction with physically handicapped students had any effect on the teachers' understanding and acceptance of these children.

Analysis of the results indicated substantial differences between the perceived concerns of teachers who had not taught physically handicapped students (Group 1) and those who had (Group 2). Among the highest ranking concerns identified by Group 1 were toileting responsibilities (78%), disproportionate amount of time required by the physically handicapped students (59%), lack of materials (57%), excessive paperwork (50%), and responsibility for administering medication (50%). In comparison, the major concerns of Group 2 were lack of materials (41%) and disproportionate amount of time being required by the physically handicapped students (34%). Although these two items were also mentioned by Group 1 teachers as primary concerns, they were included considerably fewer times. Therefore, these findings suggest that sustained interaction with physically handicapped students appears to substantially alter the perceptions of regular classroom teachers about working with these children. The authors conclude that, although additional variables need to be examined, these results have positive implications regarding the efficacy of integrating physically handicapped students in the regular classroom.

Frith, G. H., & Edwards, R. Misconceptions of Regular Classroom Teachers About Physically Handicapped Students. *Exceptional Children*, October 1981, *48*(2), pp. 182-184.

NEW PRISE SERVICE

Do you need to know the definition of an educational term? Are you trying to identify the publisher of a test? Looking for agencies and services for the physically handicapped in a certain area? If so, we can help. INFO-SPEED is a new PRISE telephone service for obtaining quick response to everyday special education questions. Call 215/265-7321 and ask for INFO-SPEED. Your questions will be answered either immediately or by the next working day. INFO-SPEED can also be accessed through SpecialNet (User name: PRISE).

TEST

In lieu of our usual test review, we are including a brief description of testing practices used at the Pioneer Education Center.

Alternative Testing Procedures for the Nonspeaking Student.

By Jackie Territo, Pioneer Education Center, Pittsburgh, PA

Testing the severely physically handicapped student is a challenge for the most skilled evaluator. With the nonspeaking student, ways of assessing verbal expressive skills using norm referenced instruments are limited. Alternative systems, such as fingerspelling, manual communication, or language boards using printed symbols or letters may provide a means of communication. The effectiveness of these systems, however, depends on the efficiency of their delivery and the ability of the examiner to interpret them. Above all, alternative systems are often limited to the familiar lexicon that is used by the student in daily interactions. For these reasons, language-free instruments like the Columbia and Leiter are often chosen over the more preferred Binet L-M and WISC-R which are used with nonhandicapped populations.

Suggestions from recent literature include using modifications such as yes/no responses to verbal questions, multiple choice tasks for vocabulary comprehension and association tasks, and encoding techniques in place of items requiring a verbal response. While these modifications facilitate gathering useful information on the child's receptive language comprehension, they do not adequately represent his or her full range of expressive competence.

Those students whose primary means of expression is through written language, and who have achieved competence in written communication, may have this option available to use in formal diagnostic testing.

At Pioneer Education Center, a Pittsburgh Public School, alternative communication devices provide another response mode for the nonspeaking student. Using a Canon Communicator (a portable printing device) one student recorded his verbal responses to the WISC-R and obtained a full scale IQ when he was tested by the school psychologist. His test scores reflected receptive and expressive intelligence, and the printed copy provided a lasting copy of responses for future reference. Subtests of ITPA (Auditory Sequential Memory, Auditory Association, Grammatic Closure, Sound Blending, and Auditory Closure) were also completed using portable printing devices.

Other systems which could be used similarly include: Sharp Memowriter, Personal Microcomputer with Printer, and a scanning printer such as the Zygo 100 and Zygo printer. The VIP by Prentke Romich and the Micon MCM could also be used to immediately display responses, but they do not offer hard copy.

Improved methods of assessment offer the multiply handicapped a more equitable opportunity to prove their abilities on standardized diagnostic tests.

CURRENT CITATIONS

DeLoach, C., & Greer, B. Y. **Adjustment to Severe Physical Disability: A Metamorphosis.** McGraw-Hill Book Co., 1221 Avenue of the Americas, New York, NY 10020. 1981. 310 pp. $18.95. This book is designed for professionals who work with disabled persons, and their families. The thesis is that if certain opportunities exist, a physical handicap does not necessarily mean maladjustment and tragedy. The disabled person can hope to live a happy life if the intangible barriers in the form of societal misconceptions and attitudes, and tangible impediments consisting of architectural barriers are removed. Topics include: the myths concerning disabilities, marriage and family life, legislation and political action, life in the community, and stigma attached to physical disabilities.

Glen, I. **Exploring with the Microcomputer.** *Special Education: Forward Trends*, September 1981. *8*(2), 16-18. This article discusses the multiple use of a microcomputer in a school for physically handicapped children in Birmingham, England. The microcomputer, which was initially purchased for use as a communication aid, is also used for teaching basic mathematics, computer studies, and for games. The availability of the microcomputer generated a great deal of interest in the students, who were soon able to use it in other areas of learning. Future uses of the microcomputer, especially in the curriculum development area, are also presented.

Healy, H., & Stainback, S. B. **The Severely Motorically Impaired Student: A Handbook for the Classroom Teacher.** Charles C Thomas, 301-327 E. Lawrence Ave., Springfield, IL 62717. 1980. 82 pp. $9.50. The purpose of this handbook is to assist educators in developing a basic understanding of the physically handicapped students being mainstreamed into their classrooms. It also provides programming strategies, techniques, and activities for the children. The text consists of two sections. The first section gives background information on motor development and abnormalities, and the second discusses practical handling and instructional concerns. A bibliography and a glossary are also included.

Panckhurst, J., & McAllister, A. G. **An Approach to the Further Education of the Physically Handicapped.** Humanities Press, Inc., Atlantic Highlands, NY 07716. 1980. 136 pp. $15.25. This handbook describes the program of Hereward College of Further Education in England. Hereward is a residential school concentrating on academically able, physically handicapped students. The three important aspects of this school are: suitable buildings and equipment for the severely physically handicapped; skilled academic staff; and competent medical, nursing, physiotherapy, and care staff. The school's program includes five major components: academic, self-care, mobility, activities of daily living, and communications.

Shaver, E. M., & Kalisankar, M. **Working with Cerebral Palsy.** George Washington University Medical Center (RT-9), 2300 Eye Street, N.W., Suite 714, Washington, DC 20037. 1981. 92 pp. $6.00. This book is written for persons with cerebral palsy, their families and rehabilitation professionals. It consists of three chapters. Chapter I contains interviews with working adults who have cerebral palsy. They describe their jobs, and how they overcame obstacles they faced. A functional description of each person is included at the end of the chapter. Chapter II describes how the job development lab staff of George Washington University determines an individual's job potential, and how and why their approach differs from more traditional approaches to vocational evaluation. Chapter III introduces the reader to alternate methods and devices for performing common job functions, and explains how these can compensate for lost or impaired functioning. A list of resources is also included.

INSTRUCTIONAL MATERIAL

Nancy Renfro Studios Puppetry Media is a collection of puppets, adaptive equipment, and books to use in the creation of puppetry programs that involve the participation of handicapped children. *Books, Puppets and the Mentally Retarded Student* provides techniques for using puppets to help students develop an understanding of literature. *Puppetry and the Art of Story Creation* describes how to integrate this dramatic art form into all areas of the curriculum. The collection includes puppet adapters and puppet bracelets; both enable children with limited or severe motor disabilities to participate in dramatic presentations. A small portable stage allows nonambulatory youngsters to present shows from their wheelchairs or beds. Two body puppets attach to the wrists and ankles of performers, freeing the hands for signing and enabling physically handicapped children to more easily manipulate the puppets. An accompanying booklet suggests that the body puppets can be used as a vehicle for teaching body awareness, social behaviors, and emotional expression as well as being practical for story telling, creative dramatics, and music activities. Two mitt puppets are also included in the kit.

Nancy Renfro Studios, 1117 W. 9th St., Austin, TX 78703. 1979. 1980. Portable stage $15.95, 3 puppet adapters $12.95, 3 puppet bracelets $19.95. *Books, Puppets and the Mentally Retarded Student* $9.95, *Puppetry and the Art of Story Creation* $10.95, mitt puppet $9.95.

NEW FILM

Transitions is a film about three people who challenge society—and themselves—in their search for freedom and equality. Jim Woods, Joan Lyons, and Richard Carroll are "disabled people" who are able to work and live independently in the community, and who fight hard for the right to achieve their dreams, while, in many ways, the world tries to hold them back. Jim and Richard, both disabled by cerebral palsy, describe their very different early lives. Jim was institutionalized and Richard lived with a caring and supportive family. Jim describes his transition from an institution to a group home and, finally, his own apartment. Richard continues to live with his family, but he faces prejudices in his attempts to advance in his janitorial job. Joan Lyons, a woman with Down's Syndrome, experiences another alternative to institutional living—sharing an apartment with a coworker from her sheltered workshop. Both women are shown working toward total independence with the help of a visiting counselor. The film conveys the message that through fierce determination by the handicapped and a much more open attitude by society, much higher levels of self-sufficiency and freedom can be achieved by the disabled than ever before.

16mm/color/28 minutes/1980/$395.00

Perennial Education, Inc., 477 Roger Williams, P.O. Box 855
Ravinia, Highland Parks, IL 60035.

PRISE is federally funded through the Pennsylvania Department of Education, Bureau of Special Education, Harrisburg, Pennsylvania. The local education agency sponsoring PRISE is the Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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PRISE reporter

issues and happenings in the
education of the speech/hearing handicapped

no. 13, may 1982

pennsylvania resources and information center for special education 1013 West Ninth Avenue, King of Prussia, Pa. 19406. 215/265-7321

ROBERT G. SCANLON—Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN—Chief,
Division of Federal Programs and Special Projects

THE AMY ROWLEY CASE

Kent Hull
Attorney-at-Law
East Lansing, Michigan

In September 1978, Amy Rowley, a deaf child with residual hearing and an IQ of 122, entered a regular first grade classroom in Westchester County, New York, to begin her education. Amy is the child of deaf parents and, since birth, her parents have communicated with her through sign language, word mouthing, visual cues, and amplification. Amy's school prepared an IEP for her that included an FM wireless hearing aid, a one-hour session each day with a tutor for the deaf, and three hour-long sessions each week with a speech therapist. Amy's parents objected to the IEP on the grounds that it did not provide for a sign language interpreter for classroom work and appealed the IEP to the Commissioner of Education, who upheld the local school district's position.

Amy's parents continued the case by filing suit in the local district court against the school district and the State Commissioner of Education. The district court found, after hearing evidence on Amy's auditory speech discrimination tests, academic record, and observation of her classroom performance, that only 59 percent of what transpired in the classroom was accessible to Amy. The court ordered the school district to provide Amy with a sign language interpreter during any school period when academic subjects were taught, "to bring her educational opportunities up to the level of the educational opportunities being offered to her nonhandicapped peers" (3 EHLR 552:101).

The school district and the Commissioner of Education appealed the decision to the United States Court of Appeals for the Second Circuit, which upheld the lower Court's decision. The appeals court held that the district court's findings were adequately supported by the facts and that it had "meticulously applied precisely the standards prescribed by Congress" (3 EHLR 552:101). In the minority opinion, Circuit Judge Mansfield dissented, saying that Amy's school performance was in keeping with her abilities, and that she was receiving the free appropriate public education she was entitled to. The school district and the Commissioner of Education then appealed the decision to the United States Supreme Court.

Basically, the Rowley case considers the obligation of a school district to provide interpreter services for a deaf student. There is no direct precedent for the case, but courts are beginning to consider the obligation of school districts to provide support services in certain situations. While the regulations under the law clearly mandate such services, this case in essence tests the validity of the law and regulation. The importance of interpreter services is clear. Without them, hearing impaired students may find it impossible to participate in integrated settings.

Also at issue in this case, is the obligation of all recipients of federal financial assistance to make accommodations for handicapped individuals. Section 504 of the Rehabilitation Act of 1973 prohibits discrimination against otherwise qualified handicapped persons. Regulations issued by such federal departments as the former Department of Health, Education and Welfare, and the current Department of Education, have interpreted the law to require affirmative modification and changes in programs.

However, the extent to which recipients are required to make accommodations has remained uncertain. In some situations, such as employment, the mandate is a flexible one. Large employers must do more than small employers. In some situations, depending on the size of the employer and the cost of accommodations, an employee might be entitled to an aide, a major architectural modification, or a modified work schedule. For smaller employers, the required changes could be much more modest.

However, modifications in federally assisted public education programs have been governed by a different standard. Here the controlling requirement is what is necessary to provide a free, appropriate education to a handicapped student. That right is established not only by the Section 504 regulations but also by regulations issued pursuant to the Education for All Handicapped Children Act, Public Law 94-142. Many states also have enacted requirements which mandate special services to handicapped students.

The significance of the Rowley case is that the Supreme Court will probably be forced to rule on the obligation of schools to provide such special services. Historically, special education programs have received substantial support distinct from other programs for handicapped people. Education is one of the areas in which civil rights have been established. However, the obligation of schools to provide accommodations has been more stringent than in other areas. The object of the law has been to assure a uniform set of services which did not vary by geography or economic factors.

In a previous case, the Supreme Court suggested that Section 504 did not require a federally assisted nursing program to make substantial modifications to accommodate handicapped students. The present case can be distinguished, however, because the handicapped child involved is also protected by Public Law 94-142. If the Supreme Court has reservations about the extent to which Section 504 alone would require interpreters, it could conclude that the combination of Public Law 94-142 and Section 504 does result in such a mandate.

In short, the significance of the Rowley case is that the Court may be forced to decide, for the first time, the extent to which affirmative efforts must be made to provide appropriate services for handicapped individuals. The decision will, no doubt, be an important one for this reason alone.

There is also a significant political dimension to the case. At present, the Reagan administration has proposed the repeal of Public Law 94-142. If the Supreme Court should hold that interpreter services can be justified only on the basis of that law, then the effect of its repeal would be even more devastating. Thus, one effect of the decision will be to indicate how necessary the existing special education system is.

A principal concern which the Supreme Court will no doubt address is the extent to which Congress expressed the intent behind the law. Both Section 504 and Public Law 94-142 are comparatively vague laws. While P.L. 94-142 embodies a complex statutory scheme, the details of what constitutes a free, appropriate public education, are generally left to the administrative agencies that enforce the law. Regulatory guidelines provide more guidance, but these provisions leave many questions unanswered.

The Supreme Court, for example, will be concerned that Congress meant for the extensive program now existing to be the means of enforcing P.L. 94-142. The technical legal term here is whether the legislative intent underlying the law requires the program now demanded by handicapped students, their parents, and guardians. It is doubtful that one will find in the debates and committee reports concerning the proposed legislation anything about the obligation of school districts to provide a certain type of instruction for hearing impaired students. To the extent that the record is unclear or ambiguous, the plaintiffs may encounter difficulty in persuading the Supreme Court that they are entitled to the services they want.

A second dimension of the legislative intent question is the issue of whether the regulation complies with the purpose of Congress. Administrative agencies are empowered to issue regulations only if their guidelines are within the authority granted by Congress in the underlying law. If an agency or department issues regulations which go beyond the scope of the law, then a court might very well invalidate the regulation.

The issue of agency authority arose when the Supreme Court considered the former HEW requirement that colleges provide interpreters for deaf students. The Supreme Court suggested, but did not hold, that HEW might have exceeded the scope of its authority when it established that requirement. Whether the Supreme Court decides the Rowley case on the basis of P.L. 94-142 or Section 504, it will probably be required to decide whether the regulations under both laws are valid.

Also involved in this case is the relationship between P.L. 94-142 and Section 504 in the context of related services. A continuing dispute has existed about whether P.L. 94-142 is the principal authority governing the design of appropriate education. Some authorities argue that it is. Others contend that the refusal to provide appropriate services constitutes an affirmative act of discrimination in violation of Section 504. One result of the case may be a decision to either strengthen or weaken the use of Section 504 in this context.

However, the major result will be a better delineation of what the law requires in the education of handicapped students. Very likely the Court will confine its decision to the facts of the case and rule only on the issue of interpreter and other assistance. In any event, it will represent a clear signal from the Supreme Court of how it regards these issues.

National Diffusion Network

The National Diffusion Network (NDN) is a nationwide system which helps local school districts improve their educational programs by making previously developed exemplary programs available for adoption or adaptation. As part of its system, the National Diffusion Network funds a number of State Facilitators who are responsible for helping interested school districts match their local needs with an NDN model program. These State Facilitators also provide the information, training and implementation assistance needed for local implementation. As an awareness service for Pennsylvania special educators, the **PRISE Reporter** will include brief descriptions of selected exemplary programs in the NDN System. The following paragraph describes one of these programs relevant to students with communication and language handicaps. For further information on this or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (R.I.S.E), 725 Caley Road, King of Prussia, PA 19406. Telephone: 215/265-6056.

Communication Program

The Communication Program serves classes of young children whose communication and language delays and disorders result from a variety of known and unknown etiologies and are frequently accompanied by other developmental lags or associated handicaps. The program offers training for classroom teachers and communication disorder specialists in classroom management of communication behaviors. It also provides experience in team decision making. Teachers and/or parents are asked to identify their concerns about a child's communication ability or language skill. Assessment tools are then used to support the concerns and document the severity of the problem. Data taken during classroom activities provide supplementary information that is used in the planning of management strategies. Team members plan individualized programs for each child, arrange for implementation of these programs, and see that data are gathered. Individualized instruction essential to management of target behaviors is achieved by furthering communication skills in every activity of the school day. All language programs are related to the child's communication needs in the environment.

Informal Language Evaluation Methods Compared

Accurate evaluation procedures that will identify the specific needs of the speech and language impaired are essential for appropriate educational programming. Yet, the ability of standardized language tests to provide the clinician with any information directly applicable to intervention is limited. In contrast, some research has suggested that informal instruments are more effective in determining a child's specific strengths and weaknesses and providing a guide for remediation. Nonetheless, the validity of utilizing informal measures of language has not yet been determined. The purpose of this study was to compare spontaneous language sampling, elicited imitation, sentence completion, and grammatical judgment as informal methods of language evaluation. Thirty children from two age groups (4-5 and 6-7 years) with diagnosed language problems were involved in the research. Each subject was given a test battery consisting of an examiner-constructed elicited imitation, sentence completion, and grammatical judgment test. A spontaneous language sample was also obtained from each student. The four evaluation procedures were then compared on their ability to assess the children's use of five syntactic structures.

Statistical analysis of the results showed that, when overall scores were compared on each of the four evaluation procedures, significant correlations existed between sentence completion, elicited imitation, and spontaneous language sampling, at both age levels. None of the correlations involving grammatical judgment were significant. However, when the results were examined with regard to individual syntactic structure, a pattern of high variability between measures was observed. These results suggest that the validity of the informal methods may vary according to the specific syntactic structure under study. On the basis of these findings, the authors suggest that a combination of spontaneous language sampling and sentence completion or elicited imitation will allow the most effective application of these tools in clinical language evaluation. With regard to the grammatical judgment procedure, the authors concluded that it revealed little of the specific nature of language deficits in the children tested.

Fujiki, M., & Willbrand, M. L. A Comparison of Four Informal Methods of Language Evaluation. *Language, Speech, and Hearing Services in Schools,* January 1982, *13*(1), p. 42-52.

[redacted]

The **Illinois Children's Language Assessment Test** (ICLAT) assesses the language ability of children, ages 3 to 6, who display a delay or disruption in the acquisition of speech and/or language. The test is divided into 18 variables which cover the matching of colors and forms, auditory retention, auditory comprehension, recognition and naming, matching of objects to test pictures, evaluation of oral musculature, evaluation of articulatory and stimulability skills, free association, matching and function, mean length of response, body concept, and copying of geometric forms. The test profile assesses six response areas: expressive, receptive, visual, auditory, symbolic, and motor function. The ICLAT was designed to measure the general areas of cognitive language behavior. Each general area takes the child from simple to more complex concepts. The scale provides prognostic information on areas in language which are weak or below developmental age. The test was developed for speech clinicians, special education teachers, or any teacher who is familiar with testing procedures. It can be given with a minimum of time, and portions of the test can be group administered. The ICLAT is a children's version of the Schuell Short Examination for Aphasia.

The Interstate Printers and Publishers, Inc., 19-27 North Jackson St., Danville, IL 61832. 1977. Complete Set $39.30.

[redacted]

Bosley, E. C. **Techniques for Articulatory Disorders.** Charles C Thomas, 301-327 E. Lawrence Ave., Springfield, IL 62717. 1981. 149 p. $16.75. This is a manual of techniques that can be adapted by speech pathologists to use with any speaker whose problem includes defective articulation. Includes information on establishing a good rapport in the first clinical session, general clinical procedures, and suggestions for carry-over use of learned skills. Separate chapters are devoted to remediation in production of bilabials, phonemes, labio-dentals, surds, fricatives, affricatives, and the *l* and *r* sounds.

Campbell, B., & Baldwin, V., (Eds.). **Severely Handicapped/Hearing Impaired Students.** Paul H. Brookes Publishing Co., P.O. Box 10624, Baltimore, MD 21204. 1982. 265 p. $15.95. This is a compilation of papers, and reactions to them, that were presented at the 1980 National Demonstration and Training Consortium Conference. The book describes developments in administrative programming, assessment, and curriculum design for severely handicapped/hearing impaired students. Section I covers such topics as incidences of the disability, inservice training, program options available to administrators, and the cooperative efforts required for strong educational service delivery. The complexity of the assessment process in relation to audiologic, medical, and cognitive factors is described in Section II. The final section, on curriculum implementation, explores such issues as how to implement change in systems where it is resisted, identification of environmental components important to instructional design, design of model infant intervention and parent training programs, and continual development of services for the institutionalized.

Cole, M. L., & Cole, J. T. **Effective Intervention With the Language Impaired Child.** Aspen Systems Corp., 1600 Research Blvd., Rockville, MD 20850. 1981. 291 p. $26.95. Aimed at a broad spectrum of educators who may come in contact with language delayed or impaired children, this source book provides information about the identification, assessment and remediation of language problems. Guidelines are provided to help pinpoint specific deficit areas, select assessment instruments, and recognize the cultural implications of language testing. A structure is described for development and implementation of a classroom-based language program; special considerations for working with the nonverbal are outlined. Specific techniques for remediation of syntactical and morphological errors, activities for enhancing receptive and expressive language, and a five-step program for teaching abstract language concepts through concept analysis are also included.

Mulholland, A. M., (Ed.). **Oral Education Today and Tomorrow.** Alexander Graham Bell Association for the Deaf, 3417 Volta Place, N.W., Washington, DC 20007. 1981. 544 p. $27.95. This book collects papers prepared for the first international Symposium on Oral Education. It provides a state of the art review of research and practices in oral education of prelingually profoundly deaf children. The historical, philosophical, psychological, and sociological foundations of oral education throughout the world are reviewed in the first section of the book. The second section examines the methods used to develop receptive and expressive oral skills in English speaking countries and Europe. A developmental view of the language taught using the oral method and a survey of the diagnostic and assessment techniques used internationally are included in sections three and four. A final section explores the social and emotional growth of prelingually deaf persons.

Taylor, J. S. **Speech-Language Pathology: Services in the Schools.** Grune and Stratton, Inc., 111 Fifth Ave., New York, NY 10003. 1981. 205 p. $19.50. This text describes the options available in school programming for speech and language pathologists. The book takes a chronological approach to describing the school speech-language pathologists' responsibilities in planning intervention strategies, case finding and selection, and program scheduling. Procedures for development of the IEP are outlined. Other topics covered are service delivery, counseling roles, supervision techniques, and utilization of supportive personnel.

Webber, M. S. **Communication Skills for Exceptional Learners.** Aspen Systems Corp., 1600 Research Blvd., Rockville, MD 20850. 1981. 275 p. $24.95. This guide assists classroom teachers in helping exceptional learners develop listening, speaking, writing, and reading skills. Each chapter includes evaluation procedures, lists of suggested classroom materials, and lesson plans for various age and developmental groups. Common physiological, psychological and emotional causes for each communication problem are discussed and remedial techniques are described. Chapters include practical methods for increasing attentiveness, handling nonstandard speech, dealing with stuttering, developing reading readiness, and teaching handwriting. Sample audiological evaluations and reading inventories are provided.

[redacted]

Reading Milestones is a set of linguistically controlled reading books and workbooks designed for deaf children, but also appropriate for use with language delayed and "English as a second language" students. Research has attributed some of the reading difficulties of deaf and other "language different" children to the lack of a basic knowledge of the language they are learning to read. An initial goal of **Reading Milestones** is to establish that written language represents meaning. The eight-level series (levels 1-3 now available, levels 4-8 available in 1982-83) provides systematic exposure to new syntactical structures, controlled presentation of new vocabulary, and instruction in reading comprehension skills beginning at a very basic level. Upon completion of the eight levels, students should have the ability to understand and read fourth-grade materials. Levels 1-3, designed to be used in initial reading instruction, present information at a slower rate than at later levels: each new word has only one meaning; phases are chunked (separated from each other); one new syntactic structure is introduced per book; and the workbook format remains constant. In later levels new words are introduced more rapidly, and multiple and idiomatic meanings are presented. The reading series provides emphasis on recognition of frequently used words with special attention given to regular spelling patterns. The phonics approach to teaching decoding skills can be taught concurrently using other recommended basal programs. Levels 1-3 develop literal reading comprehension skills; later levels introduce inferential skills. A variety of story content areas, writing styles, composition types, and genres have been incorporated at every level to best meet the individual needs and interests of young readers. Each level is packaged separately and contains a teacher's guide, a copy of 10 different readers and accompanying workbooks and a scope and sequence chart.

Dormac, Inc., P.O. Box 752, Beaverton, OR 97075. $106.50 per kit ($49.50 per set of readers or workbooks for each level; $7.50 per teacher's guide). 1981.

[redacted]

It's a New Day, a companion film to *A Different Approach*, depicts the new attitudes and technologies available to disabled people, that enable them to engage in many recreational and vocational activities. Set to music but with no narration, brief scenes show hearing impaired, blind, and physically handicapped adults using electronic devices and adaptive equipment such as a vertical-lift wheelchair, talking calculator, Optacon, and Porta-Printer. They are shown functioning as forest rangers, school teachers, and reservation clerks, and enjoying sports such as tennis and dirt-biking. This film, intended for any age audience, provides an awareness of how thoroughly and effectively the disabled can participate in all aspects of living.

16mm/color/9 minutes/1981/$135.00

The South Bay Mayor's Committee for Employment of the Handicapped, Inc., 2409 North Sepulveda Blvd., No. 202, Manhattan Beach, CA 90266.

PRISE is federally funded through the Pennsylvania Department of Education, Bureau of Special Education, Harrisburg, Pennsylvania. The local education agency sponsoring PRISE is the Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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issues and happenings in the education of the mentally retarded

Volume no. 14, september 1982

pennsylvania resources and information center for special education 1013 West Ninth Avenue, King of Prussia, Pa. 19406. 215/265-7321

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ORIENTATION AND MOBILITY: A GENERIC APPROACH METHODS TO DEVELOP INDEPENDENT TRAVEL SKILLS

Ben H. Williams
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Special Education Center
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The ability to function independently within the environment in which we live is a skill of primary importance to each individual in today's society. An essential key to the normal development of such independence is the ability to travel safely and purposefully through the environment. This skill is the only one which can effectively tie together other independent living skills in a meaningful way. Skills ranging from self care, to academics, to vocational, to social endeavors are all brought together and given meaning and purpose when an individual is an independent traveler.

There is probably no skill more taken for granted than the ability to travel independently. One normally acquires this ability as a part of his or her natural growth and development. However, a person with a sensory, physical, or cognitive impairment will often fail to learn to travel independently unless assisted by a structured developmental learning process, called *orientation and mobility instruction.*

Attempts to develop systematic methods of teaching independent travel skills began during the late 1940's to facilitate the rehabilitation process of blinded war veterans. These efforts, associated with independent travel solely for the blind, have grown significantly since World War II. In the early 1960's, some interest arose in teaching independent travel to individuals with handicaps other than blindness. These early efforts were often referred to as *travel training* programs. Most took place in rehabilitation centers and involved adult trainable mentally retarded clients. Training dealt with how to travel one specific route. However, most agencies did not feel that such individuals were capable of traveling with any degree of independence and thus did not provide such services. This situation led the President's Committee for the Mentally Retarded to state in 1972 that programs for teaching travel skills to the mentally retarded were generally insufficient.

Pittsburgh Initiates Program

In 1974, the Pittsburgh Public Schools initiated a program in which they adapted the mobility training model used by blindness professionals in an attempt to meet the needs of the mentally retarded. It was the first program to involve school age students and to provide consultation to the classroom teacher. Again, the emphasis was focused mainly upon route travel and use of the Pittsburgh Public Transportation System. The program did give the students an opportunity to be responsible for themselves as well as allowing them to have normal societal contacts. In addition, it provided them with skills that had a direct utility for their future. The results of the program showed that students who possessed adequate prerequisite skills were capable of traveling independently using a public transportation system.

The current national emphasis towards educating handicapped persons in the least restrictive environment has served to magnify the need for the development of independence in all of our special education programs. However, a tendency remains to disregard the orientation and mobility needs of handicapped students, based on the assumption that most of these individuals will somehow teach themselves to travel. In some cases these individuals are thought of as being incapable of learning to travel independently. Thus, they are taken everywhere, depriving them of firsthand experiences with their environment and the opportunity of developing those prerequisite skills needed for independent travel. Exposure to new environments, opportunities for individuals to think and solve problems independently, and critical societal interactions are eliminated, thus leaving a tremendous gap in the students' total development.

Programs Remain Scarce

Unfortunately, programs to teach independent travel skills to handicapped students are still far from abundant. While most special education programs today teach skills which are an integral part of independent travel, they are often taught in isolation, separate from the real situations in which they are to be performed. For instance, basic skills such as language and money skills, which the student can perform in the presence of people with whom he/she is familiar or in a nonthreatening environment such as the classroom, often break down when the student must interact with strangers or uniformed personnel. Also, many of these skills have not been directed towards the entire process of independent travel, nor have the total needs of the individual been considered.

Therefore, simply establishing policies, changing laws, modifying the environment, and teaching isolated skills have proven to be insufficient. Appropriate training experiences must be provided which are directed towards the entire process of independent travel and the needs of the total individual.

Experience has shown that when designing a mobility program for handicapped students, it is best to follow the model used in the field of blindness. There are five key elements to this model that make it successful.

First is the **use of the real environment.** Mobility specialists have discovered that instruction can be adequately provided only in an environment similar to that in which the student will later travel. Real environments are qualitatively different from the hallways of schools, institutions or hospitals. There is a bombardment of stimuli and a variety of competing concerns in real environments. These include existing dangers, reactions of passersby, the possibilities of getting lost, and the preoccupation of the actual business of the trip.

The second factor is **individualized instruction.** Attempting to train two students at one time will result in danger for the students, ineffective training or both. Because part of the focus of mobility instruction must be on individual problem-solving, training with another person deprives one or the other of the students of the opportunity to learn to make decisions on his/her own and to bear their consequences. Individualized instruction also enables the mobility specialist to structure the situation to reflect the level of complexity most needed by a particular student at the time of traveling. The third factor is the use of **lessons of graduated difficulty and increased responsibility.** Such lessons are needed to develop basic skills before proceeding to more complex situations and are tailored to meet the specific needs and abilities of different students. The lessons also build self-confidence in each individual's perception of his/her travel abilities as well as overcoming any fears and anxieties that may exist.

The fourth factor is the **synthesis of specific travel skills into a whole.** A common factor that has emerged in mobility training of visually impaired is that the whole of independent travel is much greater than the sum of its parts. No matter how expertly the student performs the various sub-skills in isolation, the components frequently do not come together as smoothly as expected. Unless the student gets an opportunity to put it all together in a practice situation with a mobility instructor available for feedback and assistance, it is likely that the person will not learn to travel to his/her fullest potential. The final factor is the designation of mobility instruction as being the **primary responsibility of one qualified individual working on a full-time basis.** Quality instruction can only take place when a trained mobility teacher can devote full attention to direct instruction with students.

Montgomery County Provides Instruction

In 1979, the Montgomery County Intermediate Unit began providing direct mobility instruction to students of various exceptionalities and age levels. Those participating in the program were from the educable mentally retarded, trainable mentally retarded, severely profoundly mentally retarded, and physically handicapped areas of exceptionalities. The program utilized the above five factors in developing a model. One important fact emerged from the program: upon graduating from special education programs, many exceptional students cannot travel independently. They are therefore limited in job opportunities as well as social experiences and pleasures. The President's Committee on Retardation also reported that upon graduation from special education programs, 94% of mentally retarded students live at home and 60% never go out socially or with friends. Recent research, along with the local efforts of the Montgomery County Intermediate Unit, has indicated that students possessing the necessary prerequisite skills and experiences can learn to travel independently when provided with appropriate instruction from a mobility specialist.

OMNI Develops Mobility Curriculum

To help meet the needs of educators, a prerequisite mobility curriculum has been developed by Montgomery County Intermediate Unit, utilizing Title IV-C funding. Entitled Project OMNI (Orientation and Mobility for Needed Independence), the purpose of the project is to provide an early intervention model for teaching prerequisite orientation and mobility skills and concepts. By utilizing this curriculum, the classroom teacher can provide developmental, sequential lessons and experiences which can be interfaced with regular special education curricular activities. The curriculum also suggests appropriate materials that will supplement and enhance mobility related activities. Movement through the OMNI curriculum will enable the individual student to learn the skills and develop the confidence that will make him/her more readily able to benefit from direct instruction.

Since mobility is the key to independent living, educational programs should provide early intervention, teaching the prerequisite skills and concepts necessary for independent travel. These skills should be taught gradually and sequentially, so that when direct instruction in more complex environments is appropriate, the students will have the necessary background skills and confidence.

The Project OMNI curriculum kit consists of a Teacher's Guide, Individual Student Inventory, Individual Student Profile, Basic Skills Guidebook and OMNI Mobility Activities. Limited quantities are available by contacting the Special Education Center, Montgomery County Intermediate Unit, 1605B West Main Street, Norristown, PA 19403.

DISSEMINATION HAPPENINGS

National Diffusion Network

The National Diffusion Network (NDN) is a nationwide system which helps local school districts improve their educational programs by making previously developed exemplary programs available for adoption or adaptation. As part of its system, the National Diffusion Network funds a number of State Facilitators who are responsible for helping interested school districts match their local needs with an NDN model program. These State Facilitators also provide the information, training and implementation assistance needed for local implementation. As an awareness service for Pennsylvania special educators, the **PRISE Reporter** will include brief descriptions of selected exemplary programs in the NDN System. The following paragraph describes one of these programs relevant to mainstreaming handicapped students. For further information on this or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Service for Education (R.I.S.E.), 725 Caley Road, King of Prussia, PA 19406. Telephone: 215/265-6056.

I Can Instructional Physical Education System

I Can is a physical education program for trainable mentally impaired children and youth, ages 5-25, which was developed in East Lansing, Michigan. The program has four major characteristics: 1) it offers diagnostic/prescriptive teaching for students of near zero competence to functional competence in many physical performance skills; 2) can serve as either a complete or supplemental program; 3) requires no fancy equipment or facilities; and 4) aids in compliance with PL 94-142.

An *Implementation Guide* describes program planning, assessment of student status, prescription, teaching/learning activities for the prescriptions, and evaluation of instruction.

The *Instructional Resource Materials* describe primary and secondary program content. Primary content contains 71 performance objectives for ages 5 through 14 in fundamental motor skills, body management, health and fitness, and aquatics. Secondary content, for ages 15 through 25, has a total of 79 performance objectives in backyard/neighborhood activities, team sports, outdoor activities, and dance and individual sports. Prescription and teaching follow assessment of student performance. Daily lessons can include one or more performance objectives. Reassessment determines how fast achievement occurs, helps to plan subsequent instruction, and serves as a basis for reporting progress and evaluation program effectiveness.

CURRENT CITATIONS

Bruininks, R. H.; Meyers, C. E.; Sigford, B. B.; & Lakin, K. C.; eds. **Deinstitutionalization and Community Adjustment of Mentally Retarded People.** AAMD Monograph No. 4. American Association on Mental Deficiency, 5101 Wisconsin Ave., N.W., Washington, D.C. 20016. 1981. $24.75. 412p. This book contains current research on deinstitutionalization and community adjustment of the mentally retarded. Active researchers in the field examine a wide range of topics relating to the extra-institutional lifestyles of mentally retarded people. This includes: programs to enhance opportunities for successful transitions to community life, approaches and issues in developing more systematic and valid methods for evaluating the impact and outcomes of public policies and individual programs, and problems residential services providers face in maintaining the momentum of the deinstitutionalization movement.

Connis, R. T.; Sowers, J.; & Thompson, L. E.; eds. **Training the Mentally Handicapped For Employment: A Comprehensive Manual.** Human Sciences Press, 72 Fifth Ave., New York, NY 10011. 1981. $18.95. 192p. This book provides a detailed description of effective methods to train mentally handicapped individuals for competitive employment. It contains concrete information on specific training techniques, treatment interventions in the work setting, job placement strategies, and follow-up techniques. It also examines administrative and evaluative skills, funding dynamics, and data collection systems for training programs. Special education professionals, teachers, administrators, medical and mental health practitioners will find this book useful in their training efforts.

Dickerson, M. U. **Social Work Practice with the Mentally Retarded.** The Free Press Division of Macmillan Publishing Company, 866 Third Ave., New York, NY 10022. 1981. $14.95. 224p. This book introduces social workers to issues and methods relating to practice with a developmentally disabled population. It provides a definition and etiology of retardation as well as specific interventions and treatment techniques to help practitioners encourage their retraded clients' integration into ordinary life. Case studies, supplemented by the author's personal and professional experiences, support topics of discussion which include: developing self-respect, self-discipline, and self-awareness in the retarded, dealing with sexual concerns and issues, and helping the retarded client exercise his rights to treatment.

Ehlers, W. H.; Prothero, J. C.; & Langone, J. **Mental Retardation and Other Developmental Disabilities: A Programmed Introduction.** Charles E. Merrill Publishing Company, 1300 Alum Creek Dr., Columbus, OH 43216. 1982. Third Edition. $15.95. 502p. This book provides an overview of mental retardation and other developmental disabilities including autism, cerebral palsy, cerebral dysfunction, sensory disorders, and epilepsy. Individual chapters address topics such as special education, counseling, independent living skills, community resources, vocational rehabilitation and employment. Although presented in a programmed format for self study purposes, the book can also be used by instructors in a regular classroom setting or by individuals planning to work with the developmentally disabled in the future.

Heshusius, L. **Meaning in Life as Experienced by Persons Labeled Retarded in a Group Home.** Charles C. Thomas Publishers, 301-327 E. Lawrence Ave., Springfield, IL 62617. 1981. $19.50. 164p. This book reports results of a participant observation study on how persons living in a group home for the retarded view themselves, others and the meaning of life. Chapters 1 and 2 detail the study's setting and participants as well as explain methodology, data collection and data analysis procedures. Following chapters present observations on the subjects' actions, reactions, feelings, thoughts and conversations on independence, marriage and related issues and interpersonal/intrapersonal understanding. The final chapter outlines boundaries of the study, sums up its findings and provides suggestions for research and program planning.

RESEARCH BRIEF

Diagnostic Overshadowing Subject of Research

The occurrence of emotional disturbance in the mentally retarded population is often difficult to assess because of an overlap in clinical and behavioral symptoms. The phenomena, called diagnostic overshadowing, was the subject of a recent investigation by researchers who sought to determine whether the presence of mental retardation decreased the diagnostic significance of a patient's accompanying emotional problems and abnormal behavior patterns.

The experiment was accomplished by having three randomly-selected groups of psychologists complete a diagnostic questionnaire about a hypothetical individual with a history of acute phobia. Each group's questionnaire differed only in terms of the information that preceded the basic description of the phobia. One group, for example, rated the phobia of an individual who was an alcoholic, another group rated the same phobia for an individual who was mentally retarded, and the third (control) group rated the phobia of an individual with average intelligence. The researchers reasoned that, if the psychologist tended to provide a single diagnosis in conditions where multiple handicaps were suggested, this would support the existence of an overshadowing phenomenon.

Analysis of the diagnostic impressions given in response to the questionnaires supported the hypothesis that overshadowing effects on clinical diagnosis did exist. In all three experimental conditions, the same phobia was less likely to be considered an example of a neurosis or an emotional disturbance when the subject also was suggested to be mentally retarded. Most of the psychologists tended to provide a single diagnosis in both the retardation and alcoholism conditions, even though multiple handicaps were implied in the case descriptions. The authors concluded that although there are methodological problems in generalizing from these results, at the very least these data indicate a need for greater attention to retarded individuals' emotional problems.

Reiss, S., Levitan, G. W., and Szyszko, J. **Emotional Disturbance and Mental Retardation: Diagnostic Overshadowing.** *American Journal of Mental Deficiency,* May 1982, 86(6), pp. 567-574.

TEST

The **Career Adaptive Behavior Inventory for the Disabled (CAB)** is an informal assessment device designed for use with educable mentally retarded, trainable mentally retarded, severely mentally retarded, and multiply handicapped students, ages three to fifteen. The Inventory consists of 120 behavior items classified under ten categories: Academics, Communication, Interests, Leisure Time, Motor, Responsibility, Self-Concept, Self-Help, Socialization, and Task Performance. The student is rated individually either by direct observation and/or memory in as little as 30 minutes. Scores range from zero to 5 for each behavior item and from zero to 60 for each category, depending upon the extent to which the student is able to perform a specific task. The rating form provides profiles for the 10 career categories, and total performance, as well as strengths and weaknesses.

The Inventory may be of use to special education teachers, psychologists, vocational and rehabilitation counselors, and parents in developing units of instruction, designing individual education prescriptions and planning prevocational and vocational training. As a pre- and post test, the test offers support for accountable gains made by students in the basic career education skills. Reliability and validity data are included in the manual. A book of developmental activities to build deficient skills in each of the 120 behavior items is available.

Special Child Publications, 4535 Union Bay Place N.E., Seattle, WA 98105. Complete Set $23.50.

VIDEOTAPE

The Other Children presents the pressures and rewards of growing up with a mentally retarded, autistic or cerebral palsied brother or sister. Four siblings of developmentally disabled individuals join in a panel discussion conducted at the Manhattan Mental Retardation/Developmental Disabilities Council. The panelists describe the profound effects of a disabled child on a family's interactions. Concerns for the future welfare of their disabled siblings are presented. The effects of these concerns on their own life choices are described. The videotape provides discussion material for groups interested in disabled individuals: parents or sibling groups, professionals, or advocates of the disabled within the community.

3/4 inch videocassette/color/30 minutes/1981/$195.00

Special Citizens Futures Unlimited, Inc., 823 United Nations Plaza, New York City, NY 10017.

INSTRUCTIONAL MATERIAL

The **Trainee Performance Sample** is a hands-on vocational assessment tool developed to measure the response to training of severely mentally retarded adolescents and adults. Various training techniques are included in the administration of the TPS. A trainee's response to the various techniques indicates the most effective type of training for that individual. The ability to be trained on vocational tasks rather than prior learning experience in the area is the targeted result. The assessment also yields an indication of the general level of program support services necessary for the individual to function in a pre-vocational or vocational setting. The TPS was developed over a ten-year period of research at the University of Oregon. It can be used with low-moderate, severely and profoundly retarded individuals to develop individualized programs for vocational instruction.

Ideal Developmental Labs, 2911 South 160 Street, New Berlin, Wisconsin 53151. 1982. $495.00.

PRISE is federally funded through the Pennsylvania Department of Education, Bureau of Special Education, Harrisburg, Pennsylvania. The local education agency sponsoring PRISE is the Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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PRISE reporter

issues and happenings in the
education of the learning disabled

no. 14, october 1982

pennsylvania resources and information center for special education 1013 West Ninth Avenue, King of Prussia, Pa. 19406. 215/265-7321

ROBERT G. SCANLON–Secretary of Education,
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MICROCOMPUTERS IN SPECIAL EDUCATION: THE POTENTIAL AND THE PITFALLS

Alonzo E. Hannaford
Professor of Special Education
Western Michigan University
Kalamazoo, Michigan

Microcomputers are being incorporated into our schools in ever increasing numbers, and they are found at all levels in our educational system. Today their utility in special education is being increasingly explored, but many special educators remain uninformed about the technology, its potential, and its pitfalls. For example, not long ago I received a phone call that went something like this:

"This past year we purchased two microcomputers for our special education program. The teachers don't know anything about them, how to use them, or what they can be used for. Could you help us with some inservice education?"

"Just what type of inservice did you have in mind?" I initially asked.

"We would like you to explain what microcomputers are, how they work, what they can do, how they can be used in special education, what programs are available, and how we can write our own educational material for the microcomputer."

"How much time have you allocated for this inservice?" I then asked.

"Oh, we've set aside an entire half-day!"

Special Educators Need Knowledge of Microcomputers

I would like to believe this is not indicative of the level of awareness of microcomputers among special education teachers, but my experiences do not support such a belief. More and more teachers are becoming aware, but this is a distant goal for far too many. If this lack of familiarity continues, the result will be disappointment and disillusionment with this technology. Microcomputer technology is not a "cure all" and certainly will not replace teachers, but it does have a growing potential for use in educating the handicapped. This potential is being affirmed by such things as the creation of a new section entitled "Computers in the Schools" in the *Journal of Learning Disabilities,* and the sponsoring of a Microcomputer Conference this coming March by the Council for Exceptional Children. Educators of the learning disabled need to become more aware of the microcomputer's potential as well as the possible pitfalls surrounding its educational use.

As is true with nearly every emerging technology, special educators have begun to examine various ways in which the microcomputer can help handicapped learners. In general, these uses fall into three categories: 1) compensatory tools, 2) instructional management tools, and 3) instructional delivery tools.

Compensatory Tools. Microcomputers can help the handicapped compensate for lost or reduced functioning in certain areas. Most of the publicity surrounding the use of microcomputers with the handicapped has been in this category. The technology is being utilized to help the visually impaired read, the hearing impaired communicate, and the physically handicapped lead more normal lives. However, the relative number of handicapped individuals helped by microcomputers in this manner is small since these are low incidence exceptionalities.

Instructional Management. Larger schools have been using computers for many years to maintain records, budgets, schedules, etc. Microcomputers are encouraging additional instructional management applications such as assessment, prescription, and student and program evaluation. Certainly the presence of readily available and uncomplicated information storage and retrieval programs will prove to be a boon to special educators faced with a seemingly ever increasing need for information by local, state, and federal agencies. There is, however, an additional area of potential benefit which will have a more direct effect on large numbers of handicapped learners: the delivery of instruction.

Instructional Delivery. There is a variety of possible applications for microcomputers in instructional delivery. The microcomputer, being tireless, definitely has a use in the delivery of drill and practice to learning disabled and other mildly handicapped students. Microcomputers also can be used in a tutorial mode to provide first time and/or remedial instruction in almost any area. In addition, they can be used to provide students with simulations of situations which would not otherwise be feasible. There are also games of various types available, some of which have a high degree of educational significance. Microcomputers can be used in problem solving, as calculators, or as objects of instruction. Indeed, it is exciting to think of learning disabled students even becoming involved in the programming of microcomputers. Since such programming requires precision in logic, syntax, and spelling, some students may become highly motivated to acquire those necessary skills.

The microcomputer offers several potential advantages for instruction to learning disabled students. With proper programming the microcomputer can present highly individualized instruction, including both level and sequence. Beyond that, a student can be assessed upon entry into a program and, based upon the response given, flexibly branched to a part of the program which presents the material at a lower conceptual level, at a slower speed, and in a larger number of instructional steps. The user can also be branched upward to a higher conceptual presentation of the material or into a mode which requires the application of learned material.

The microcomputer can also provide instruction which is self-paced, giving the learner control of the rate at which the material is presented. In addition, the type and magnitude of reinforcement can be "tailored" to the learner's needs as can the feedback provided for correct and incorrect responses.

Students Motivated by Microcomputer

The microcomputer is also a highly motivating medium of instruction. Many students not only are unafraid to use this medium but actively seek out opportunities to use it. There appear to be several reasons for this. First, it is a medium which they control to a large extent. If the content is self-paced, the learner is in direct control of at least the rate at which material is presented. Secondly, the microcomputer is non-judgmental. This medium does not become frustrated or upset, even with repeated wrong responses. Third, most microcomputers can present information in a multi-sensory format since text, sound, and graphics can be combined in an appealing manner.

The microcomputer has the advantage of being a truly interactive instructional medium. It can present information, elicit student responses, evaluate those responses, and based upon them, provide feedback and/or other instruction. The learner, in essence, carries on a dialogue with the writer of the program. It is even possible for the learner to ask for additional clarification of material and, if the program does not have the capability of answering the question, for the microcomputer to store this request for a later response from the teacher.

Certainly the capacity of the microcomputer to be much more than a programmed learning mechanism or an electronic workbook offers a great potential advantage to both the learner and the teacher.

Take Care to Avoid Pitfalls

Although there are many potential uses of microcomputers with the learning disabled, there are also some pitfalls which must be carefully avoided.

Pitfall 1. Appropriateness of the educational programs (software). Care must be taken to make sure that the software is appropriate to the needs and characteristics of the learner, the needs of the teacher, and the curriculum. For example, since instruction via the microcomputer is largely oriented toward the written word, it is necessary that the learner be able to read the material in order to benefit from it. Material written at an inappropriate level will not meet the needs of the learner. Likewise, material which excessively flashes, beeps, or otherwise is distracting may not be appropriate. The software must also be of a nature that will meet the needs of the teacher. Software which requires a high level of teacher monitoring may not be appropriate. And, of course, the content of the software must be compatible with the curriculum.

Pitfall 2. Hardware/software incompatibility. Strange as it may seem, educational programs written for one brand of microcomputer generally will not work on another brand. Although the language used by the microcomputers may be similar or even the same, there are differences in the dialects as well as differences in the way the microcomputers are designed which make them incompatible. The unwary educator may buy instructional software which appears to be suited to the needs of the learner, the teacher, and the curriculum, only to find it cannot be used on the microcomputer which is available.

Pitfall 3. Quality of the software. Much of the educational software currently available is of marginal to poor quality. In too many instances the content has not been analyzed or sequenced in a manner to make it suitable for use with learning disabled students. Improvements are occurring but the process is slow and expensive. In the past, and even to some extent today, educational software was produced by programmers rather than educators, and few programs had the benefit of knowledgeable writers and instructional designers. Consequently, many programs present the material poorly and are inadequate in handling incorrect responses and providing feedback and reinforcement. The unwary special educator can soon find himself/herself in possession of software which will not be usable.

Pitfall 4. The Bandwagon. The meteoric rise of microcomputers and their infusion into many facets of our lives seem to point toward our use of them to educate the handicapped and to do so without delay. However, an uninformed rush into their use is likely to do as much harm as good. Before trying to utilize this technology, it is imperative that educators understand what it is, what it can do, what it cannot do, and decide whether it is the right medium for them and their students. Unless this occurs, much of the potential of this technology may never be attained because teachers and students will become so disillusioned with the technology that they may reject it altogether.

CURRENT CITATIONS

Bley, N. S. & Thornton, C. A. **Teaching Mathematics to the Learning Disabled.** Aspen Systems Corporation, P.O. Box 6018, Gaithersburg, MD 20877. 1981. 421p. $26.75. The purpose of this book is to assist learning disabled students in becoming independent problem solvers and mastering the math skills of daily living. Following a brief overview of learning disabilities and the effect they have on the learning of mathematics from elementary grades through junior high school, attention is drawn to general techniques which can be used to aid in classroom planning and instruction. The remainder of the book is devoted to specific areas of mathematics instruction, and emphasis is given to those topics that commonly cause the most difficulty for learning disabled students. A sequence of suggested activities and exercises is provided to highlight instructional alternatives for meeting special needs.

Cruickshank, W. M., & Lerner, J. W., eds. **Coming of Age: Vol. 3, The Best of ACLD.** Syracuse University Press, 1011 E. Water St., Syracuse, NY 13210. 1982. 237p. $12.95. Included in this volume are papers selected from presentations made at the eighteenth annual conference of the Association for Children and Adults with Learning Disabilities (ACLD). The sixteen essays focus on five main areas: (1) *Pressing Current Issues* including an analysis of the legal implications of the IEP. (2) *Family and Social Systems* with pointers for parents using paraprofessionals in the therapeutic process; (3) *Development of Mental Processing Abilities* with updated research on this subject; (4) *New Strategies for Teaching Reading* consisting of phonemic analysis, error monitoring, auricular reading techniques, and strategies for teaching and assessing disabled readers; and (5) *Written Language Problems* with a study of handwriting.

Evans, Martha M. **Dyslexia: An Annotated Bibliography.** Greenwood Press, 88 Post Rd. West, P.O. Box 5007, Westport, CT 06881. 1982. 645p. $49.95. This annotated bibliography contains contemporary and retrospective citations on dyslexia. For the purpose of this book, dyslexia is defined as a severe reading disability in children of normal intelligence and motivation. The following types of entries are cited, annotated and indexed: books, chapters from books, journal articles, conference reports, pamphlets, government documents, dissertations, and proceedings of symposia. This is a useful reference book for anyone interested in dyslexia, its etiology, diagnosis and treatment.

Gerber, A. & Bryen, D.N. **Language and Learning Disabilities.** University Park Press, 233 E. Redwood St., Baltimore, MD 21202. 1981. 341p. $19.95. This book includes material to provide both a better understanding of and effective treatment for language problems of children with learning disabilities. It consists of three parts. Part I describes historical trends in the field of learning disabilities. Part II is concerned with educational suggestions and remedial practices for those interested in assessing language functioning and following through with the diagnostic results of evaluation. The delivery of services is the main theme of Part III, which describes relevant aspects of P.L. 94-142 and their implications for service delivery. Also included are approaches to the professional designing of classroom programs. The book is intended for preservice and inservice speech/language pathologists and learning disabilities specialists.

McCrae, M. Q. **Medical Perspectives on Brain Damage and Development.** Berks County Intermediate Unit/Family Centered Resource Project, Special Education Fiscal Manager, 2900 St. Lawrence Ave., Reading, PA 19606. 1981. 24p. $3.00. This monograph provides a concise review of neurological development, dysfunction, assessment and intervention. It can be used by students and practitioners involved in helping handicapped infants and young children.

RESEARCH BRIEF

Effect of Children's Medication on Teacher Behavior

Psychostimulant medications generally are acknowledged to be responsible for significant changes in the behavior of hyperactive children. The effects of children's medication on teacher behavior in the classroom, however, has not yet been resolved. To determine this, researchers from the University of California devised the following experiment.

Twenty-two hyperactive boys and 39 normal comparison boys were enrolled in a summer research program. All the hyperactives had been previously maintained on methylphenidate (Ritalin). They were divided into two groups and their medications adjusted so that half would be on methylphenidate at a given time and the others on placebo, then vice versa. Their teacher was informed that during the course of the program a test would be conducted and that certain class sessions would be monitored. She was not told the object of the study, or that some of her students were hyperactive and on medication. Independent observers were used to determine the frequency of the teacher's contacts with each of her students and the degree of control she exercised over them. The teacher's behavior toward individual students was also measured by the Conners Abbreviated Symptom Questionnaire.

Analysis of the results indicated that the medication status of the hyperactice boys had a clear impact on the behavior of their classroom teacher. Observations showed that the teacher had more contacts, and more controlling contacts (disciplinary actions), with the hyperactive children when they were on placebo than toward the other group. No differences emerged between the comparison and medicated hyperactive groups, suggesting that methylphenidate served to normalize teacher-pupil interactions. From the teacher's perspective, the hyperactives, when they were medicated, appeared much the same as the normals. In addition, the researchers discovered that the teacher's behavior toward each individual was moderately to strongly related to her global impressions of the youngster rather than to current classroom behavior. Thus, the researcher's results suggest that a hyperactive child's presence in the classroom may not be disruptive or distracting to the teacher, if the student is receiving proper medication.

Whalen, C. K., Henker, B., & Dotemoto, S. **Teacher Response to the Methylphenidate (Ritalin) Versus Placebo Status of Hyperactive Boys in the Classroom.** *Child Development,* September 1981, 52(3), pp. 1005-1014.

DISSEMINATION HAPPENINGS

National Diffusion Network

The following program is available for adoption or adaptation through the National Diffusion Network (NDN). For further information on this or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (RISE), 725 Caley Road, King of Prussia, PA 19406. Telephone: 215/265-6056.

Systematic Instructional Management Strategies (SIMS)

SIMS is a program which utilizes management strategies and a structured, sequenced curriculum to help teachers plan appropriate instructional programs for disabled readers. The program is especially designed for disabled readers in grades 1-12 who need basic coding skills, and for the teachers serving that population.

A discrepancy model for solving performance problems provides the framework for the *SIMS* curriculum. The curriculum consists of a hierarchical sequence of 53 objectives needed to acquire the basic coding skills of reading and spelling. For each of the 53 objectives there are word and sentence lists to monitor the accuracy of skill acquisition of individual children. Additional word lists for each objective are designed to monitor the proficiency with which a student decodes words of a particular pattern.

There are four stories for each of the 53 objectives. Written language worksheets with controlled reading levels matching the word list level provide activities which simultaneously develop the student's writing skills. Comprehension questions and worksheets for scanning stories are used to develop independent study skills. *SIMS* teachers are trained to use data decision rules to plan appropriate instructional interventions.

TEST

The **Learning Disability Rating Procedure (LDRP)** was developed for use in the placement of elementary and secondary students. Teachers, diagnosticians and parents summarize the student's behavior and determine whether or not the assignment of the learning disability label is appropriate. The LDRP consists of ten indicators: General Intelligence (IQ), Reading Decoding, Listening Comprehension, Comprehension Variance, Socially Inappropriate Behavior, Expressive Verbal Language Development, Learning Motivation, Expressive Writing Development, Independent Work Level/Distractibility, and Severe Learning Discrepancy.

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These indicators were extrapolated from the P.L. 94-142 definition of learning disabilities and were chosen because of their frequent use during formal and informal student evaluations.

The rating procedure yields a composite score which falls into one of four categories, describing students as poor, fair, good, or excellent candidates for learning disability placement. This procedure is a method for summarizing information in regard to placement and is not a psychometric test. Since the LDRP is based on the assessment of behavior in the educational setting, medical and other professional findings should also be considered when determining placement options. Reliability and validity data are included in the manual.

Academic Therapy Publications, 20 Commercial Blvd., Novato, CA 94947. 1981. Complete Set $13.50.

INSTRUCTIONAL MATERIAL

The Fokes Written Language Program is designed to be used by both special education and regular teachers as a supplement to language training that is part of a speech, special education classroom, resource room, reading or ESL program. The program can be utilized with small groups or individuals in the middle to upper elementary grades who are mildly to moderately deficient in expressive language due to retardation, sensory impairment, learning difficulties or language disabilities.

The materials provide practice in writing sentences using the syntactical forms taught in the **Fokes Sentence Builder** series. Eight story books, each with 6-8 stories, provide the context for the appropriate use of the grammatical forms; stories contain both examples of a newly introduced structure and forms presented in previous books. Two worksheets accompany each story and require students to write sentences using diagrams provided as models for construction. A guide provides specific instructions for presenting lessons for each of 25 grammatical sets.

Written Language can be used independently or in conjunction with the **Fokes Sentence Builder** and **Expansion** programs. The reading level is first to second grade.

Teaching Resources Corporation, 50 Pond Pack Road, Hingham, MA 02043. 1982. $49.95

NEW FILM

The film **Parental Scripts** illustrates the varied feelings parents experience when raising a child with special problems. Parents shown in the film reveal feelings of guilt, frustration and anger in reaction to the situations they face. The different approaches parents utilize in dealing with their children are also explored. Scripts include the ignoring parent, the martyr, the activator, the controller, and the jester. It is stated in the film that handicapped children are as curious and active in the beginning as normal children. However, if these special children do not receive continuous stimulation, they may become passive. Reenactments of several family situations stress the importance of parents providing security, acceptance, self-confidence and encouragement. Also included is a manual with role playing suggestions. This film offers insight for parents of the handicapped and to teachers working with those parents and their children.

16mm/color/sound/15 minutes/1981/$250.00

Lawren Productions, Inc., P.O. Box 666, Mendocino, CA 95460.

PRISE is federally funded through the Pennsylvania Department of Education, Bureau of Special Education, Harrisburg, Pennsylvania. The local education agency sponsoring PRISE is the Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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no. 14, november 1982

pennsylvania resources and information center for special education 1013 West Ninth Avenue, King of Prussia, Pa. 19406. 215/265-7321

ROBERT G. SCANLON–Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN–Chief,
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INTEGRATING SERIOUSLY EMOTIONALLY DISTURBED STUDENTS WITH NONHANDICAPPED STUDENTS

William Stainback, Ed.D.
Susan Stainback, Ed.D.
University of Northern Iowa
Cedar Falls, Iowa

There is no question that a child's behavior is highly influenced by those with whom he or she interacts. Clearly a child placed in an environment dominated by abnormal behavior will have a reduced chance of learning normal behavior. Thus one might conclude that a child who is in the first instance seriously "disturbed" has little chance of learning more normal behavior if the only models available are other children who display a similar variety of deviant behaviors.

Since increasing numbers of professional educators are beginning to recognize the detrimental effects of placing seriously disturbed children in segregated, abnormal environments, more special education classes are being located in regular neighborhood public schools. However, some educators feel that this is not enough. In addition to physically locating seriously disturbed students in regular schools, they are attempting to integrate such students into as many regular school activities as possible. Educators are finding that these students can successfully participate in or at least partially participate in many such activities together with their nonhandicapped peers.

Educators Provide Integrated School Activities

While it is not appropriate for seriously disturbed students to be integrated with nonhandicapped students during many academic and highly competitive tasks, there are numerous ways special and regular class teachers can cooperate to provide integrated school experiences. For example, teachers can help facilitate integration of seriously disturbed students with regular students by combining such selected activities as homeroom, art, music, recess, Thanksgiving and birthday parties, show-and-tell times, and rest periods. Also teachers can encourage nonhandicapped students to visit special education classrooms where they can work as tutors, helping the special students with their academic studies. Teachers can work together to facilitate interaction among students in the school cafeteria, on the playground, at assembly programs, in the hallways and at the bus loading zones.

Techniques Promote Interaction

When integrated school experiences are provided for seriously disturbed students, it may be necessary for school personnel to actively promote interaction. Even though opportunities are provided, interaction between students does not always occur spontaneously. This is especially true when seriously disturbed students are first integrated into regular school activities with their nonhandicapped peers.

The following are suggestions for promoting interaction:

- **Reduce size of group.** It has been found that interaction between students of varying developmental levels tends to occur more frequently in small groups than large ones. In the small group structure, all students apparently have a better chance to get to know and interact with each other. Thus if a combined group becomes large, it should be divided into several smaller heterogeneous groups in order to facilitate interaction.

- **Establish goal structure.** When handicapped and nonhandicapped students are grouped together, establishing a cooperative goal structure tends to facilitate positive interaction among group members. In such a structure all members of the group must work together to achieve a common goal, and individual activities must be coordinated. Other types of goal structures which do not facilitate positive interaction should be minimized. This includes situations in which: 1) each group member has the same basic goal and strives to do better than his or her peers; and 2) each member has his or her own goal and operates independently from other group members. Thus educators can enhance the probabilities of seriously disturbed and nonhandicapped students interacting successfully by assigning group projects that have a cooperative goal.

- **Improve social skills.** Even after small group cooperative learning environments are established, some educators find that many seriously disturbed students fail to exhibit appropriate social behaviors. This lack of social skills often interferes with attempts to promote interaction. Fortunately, systematic training can be provided to improve the social interactional skills of many seriously disturbed students. Training methods which have been successfully employed include the use of verbal and gestural prompts, reinforcement, and adult and peer models.

- **Train nonhandicapped students.** The final method suggested for promoting successful interaction is the process of training nonhandicapped students to interact with seriously disturbed students. Unfortunately, some regular students express negative attitudes about their seriously disturbed peers and do not interact with them. This should present a challenge to educators rather than a limitation. Surely such behavior of presumably normal children is susceptible to change. There are basically two methods that have been used to change nonhandicapped students' attitudes and behaviors. The first is the direct instructional method designed to provide regular students with a better understanding of special students. The second involves encouraging and reinforcing regular students' interaction attempts with seriously disturbed students. While both types of training have been used successfully, the joint utilization of the two methods offers a more comprehensive and potentially effective approach.

It should be noted that not all nonhandicapped students express negative attitudes toward seriously disturbed students. In fact, researchers have found that the majority of regular students express positive attitudes toward special students. Researchers have also found that many nonhandicapped students express a desire to help the severely handicapped to function successfully in regular schools. However, it is important that educators work to change the attitudes and behaviors of those who are negative. We do not want youngsters growing into adulthood with negative and intolerant attitudes toward handicapped members of society.

Providing opportunities and facilitating positive interactions between special and regular students can benefit both groups. Seriously disturbed students are given opportunities for more expanded and normalized learning experiences. Nonhandicapped students are able to learn first hand about human differences and similarities and how to approach and interact with handicapped members of society.

[redacted]

National Diffusion Network

The following programs are available for adoption or adaptation through the National Diffusion Network (NDN). For further information on these or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (RISE), 725 Caley Road, King of Prussia, PA 19406. Telephone, 215/265-6056.

Project STAY: School to Aid Youth

STAY is a program designed to provide early identification and treatment to meet the social, emotional and academic needs of at-risk children in grades 1-3. Offering such children a chance to succeed at an early age improves their attitudes and performance levels and helps prevent their becoming drop-outs in the secondary grades.

Children are screened in kindergarten and spend half their time in the regular classroom and half in the project. Individual instructional patterns are developed to provide the following: 1) remedial instruction in mathematics and reading; 2) identification of poor self-concepts leading to social problems; 3) referral of parents and students to appropriate community agencies. Counseling sessions are offered to parents and teachers to create awareness in meeting problems.

Project *STAY* utilizes innovative teaching devices designed by teachers, and an individualized teaching approach is based on the information available for each child.

PRISE INFORMATION DISSEMINATION SYSTEM

The 1982-1983 PRISE Liaisons are listed below. If you wish to request information from PRISE, please contact the Liaison in your Intermediate Unit.

Special education private schools, state schools and hospitals, and other special education facilities should continue to contact PRISE directly.

Intermediate Unit Liaisons

Ms. Lynn McDowell
Intermediate Unit 1
412/938-3241

Mr. Bruce Bishoff
Pittsburgh-Mt. Oliver IU 2
Allegheny IU 3
412/443-7821

Ms. Marlene Schell
Midwestern IU 4
412/458-6700

Ms. Karen Katich
Northwest Tri-County IU 5
814/734-5610

Mr. DeWayne Greenlee
Clarion Manor IU 6
814/432-8113

Ms. Patricia L. Nolan
Westmoreland IU 7
412/836-2460

Mr. John Lizik
Appalachia IU 8
814/472-9821

Mr. Robert Porkolab
Seneca Highlands IU 9
814/887-5512

Mr. David Mowery
Central IU 10
814/342-0884

Ms. Kathy Stimely
Tuscarora IU 11
814/542-2501
717/899-7143

Mr. Warren J. Risk
Lincoln IU 12
717/624-4616

Ms. Joyce Shopp
Lancaster-Lebanon IU 13
717/569-7331

Dr. Albert Johnson
Berks County IU 14
215/779-7111

Mr. Marc A. Bauer
Capital IU 15
717/761-6280

Ms. Sue Palkendo
Central Susquehanna IU 16
717/524-4431

Mr. Joseph A. Klein
BLaST IU 17
717/265-2892

Ms. Loretta Farris
Ms. Barbara Law
Luzerne IU 18
717/287-9681

Mr. John Lawler
NE Educational IU 19
717/344-9233

Ms. Tammy Boyer
Colonial-Northampton IU 20
215/759-7600

Ms. Barbara Balas
Carbon-Lehigh IU 21
215/799-4111

Ms. Paula Rothrock
Bucks County IU 22
215/348-2940

Mr. Doyle Lynn
Chester County IU 24
215/383-5800

Ms. Judy Quenzel
Delaware County IU 25
215/565-8980

Ms. Linda Brown
Phila. School District IU 26
215/438-9054

Mr. Richard Fredericks
Beaver Valley IU 27
412/774-7800

Mrs. Susan Perfetti
Arin IU 28
412/354-3111

Mr. Joseph Banket
Schuylkill County IU 29
717/628-5687

During the 1982-83 school year, PRISE will be gathering data on the feasibility of implementing the PRISE Liaison model in school districts and private schools. Presently, the system is being piloted in the two locations listed below. Additional sites will be added throughout the school year.

Pilot Site Liaisons

School District	**Private Facility**
Mrs. Anita Inskip Schulze Council Rock School District 215/968-7010	Ms. Joyce Lentz Elwyn Institutes 215/358-6487

[redacted]

Hobbs, N. **The Troubled and Troubling Child: Reeducation in Mental Health, Education, and Human Services Programs for Children and Youth.** Jossey-Bass Publishers, 443 California St., San Francisco, CA 94104. 1982. $18.95. 397p. This book describes a new approach to working with children and youth, age 18 months to 18 years, labeled emotionally disturbed, behaviorally disordered, or mentally ill. Reeducation, or "Re-ED" as it is often called in reference to emotionally disturbed children, uses concepts and procedures derived largely from education, but cast in an ecological framework and informed by insights of the mental health disciplines. The principles and strategies of Re-ED are based on the belief that emotional disturbance is not a symptom of individual pathology but of a malfunctioning human ecosystem. This book is intended primarily as a guide for professionals or advanced students who work or plan to work with troubled children. It provides a basic understanding of Re-ED's underlying principles as well as its daily application in the workings of a program.

Millman, H.L., Schaefer, C. E., & Cohen, J. J. **Therapies for School Behavior Problems.** Jossey-Bass Publishers, 433 California St., San Francisco, CA 94104. 1980. $18.95. 530p. The authors provide concise descriptions of alternative, proven methods for eliminating or controlling 39 school behavior problems including truancy, disruptiveness, impulsivity, dishonesty, procrastination, prejudice, anxiety, and substance abuse. Each therapy is presented in the form of a two to three page digest of a professional article which contains practical, how-to-do-it information on several different approaches and how they can be applied in school settings. A wide range of professionals who work with children will find this a convenient source book in helping them select therapies best suited to a particular child and setting.

Paul, J. L., & Epanchin, B. C., eds. **Emotional Disturbance in Children: Theories and Methods for Teachers.** Charles E. Merrill Publishing Co., Division of Bell & Howell Co., 1300 Alum Creek Drive, Columbus, OH 43216. 1982. $17.95. 436p. A practical and eclectic perspective helpful in training teachers to work with emotionally disturbed children is stressed in this book. The introductory section presents an overview of emotional disturbance in children and describes professional services available to them and their families. In the second section the major theories of behavior and behavior deviation are examined, including pyschodynamic, organic, behavioral, ecological, sociological, and cultural. Emphasis is placed upon the practical implications of these perspectives for the classroom. The third and final section of the book deals with curriculum and teaching methods, featuring descriptions of specific instructional strategies and behavior management techniques.

Ross, A. O. **Child Behavior Therapy: Principles, Procedures, and Empirical Basis.** John Wiley & Sons, Inc., 605 Third Ave., New York, NY 10158. 1981. $24.95. 425p. This book provides a comprehensive review of child behavior therapy for readers having some familiarity with psychological disorders of children. The principles on which behavioral treatment of children is based are briefly summarized, relevant research is extensively surveyed, and behavioral treatment procedures applicable to various problems of children and adolescents are detailed. Includes citations of nearly 500 research and case studies for readers interested in pursuing a given topic in greater detail. This book is especially useful for students of child behavior therapy at all levels, graduate students in clinical psychology and other helping professions, and professional practitioners seeking to update and expand their knowledge and skills.

Stein, M. D., & Davis, J. K. **Therapies For Adolescents.** Jossey-Bass Publishers, 433 California St., San Francisco, CA 94104. 1982. $17.95. 393p. Immediate access to practical information on effective techniques for treating the full range of behavioral and emotional problems experienced by adolescents is provided in this handbook. It contains concise digests of 121 articles describing the application of therapeutic techniques to specific adolescent problems such as depression, anxiety, weight control/obesity, and insomnia. Also included are strategies for helping adolescents control antisocial behavior, improve relationships with peers and adults, come to terms with their sexual identity, and deal with drug and alcohol abuse.

Wells, C. F. & Stuart, I. R., eds. **Self Destructive Behavior in Children and Adolescents.** Van Nostrand Reinhold Company, 135 West 50th St., New York, NY 10020. 1981. $19.95. 348p. This book contains pragmatic guidelines for managing a wide range of self destructive behaviors including suicide, attempted suicide, alcohol and drug abuse, eating disorders, promiscuity, and unwanted pregnancy. Examines childhood and adolescent depression as well as problems teenage runaways and prostitutes face. Explains the latest developments in behavior modification therapy and conjoint family therapy.

[redacted]

Tension Easers: An Awareness Program for Stress Management and Personal Development. This program is designed to help individuals to better control their lives by reducing tension, stress and anxiety. A series of cassettes and personal development techniques is utilized which deals with cognitive, affective, behavioral, physical and interpersonal factors. Through the program individuals will learn to control and lower stress levels, improve concentration and increase creative energy. **Tension Easers** is self paced and is applicable for administrators, teachers and students. Included in the series are four cassettes, relaxation charts, tension logs and two instructional activity booklets.

Leadership Catalysts, Inc., 903 Edgewood Lane, Cinnaminson, NJ 08077. 1979. $81.95.

[redacted]

Stress: A Personal Challenge examines stress in modern society, both its symptoms and techniques that can be utilized to manage the stress response. Emphasis is placed on learning to recognize one's own mental and emotional stress levels and on developing coping techniques. Among the suggested techniques are cognitive reprogramming, present centeredness, integration exercises, deep abdominal breathing, relaxation responses, visualization, and summoning of inner resources to redirect stress to an advantage. Stress is a constant factor in our society, and this film offers some methods for controlling this unsettling emotion.

16mm/color/sound/30 minutes/1980/$470.00 11

ABC Wide World of Learning, 1330 Ave. of the Americas, New York, NY 10019.

[redacted]

Relation of Lead Poisoning to Behavioral Problems

Children who survive lead poisoning are at risk for severe behavioral disorders resulting from damage to the central nervous system. More recent research suggests that many children today have lead levels in the blood that, although nontoxic, are high enough to endanger their health and cause behavioral problems such as hyperactivity, impulsiveness, and short attention span.

The present study was undertaken to investigate possible relationships between lead levels and behavioral problems in children. Twenty-six children, aged eight to ten years and attending regular school, were chosen to participate on the basis that they exhibited severe classroom behavioral problems. A control group of twenty-nine children was also selected and matched as carefully as possible by age, sex, ethnic group and socioeconomic status. All subjects were asked to submit hair samples. The hair was then analyzed for mineral content by induction-coupled plasma spectroscopy, enabling the children to be categorized as having high exposure or low exposure to lead. Each child was also rated by his or her classroom teacher on the Walker Problem Behavior Identification Checklist. Correlations between lead levels and WPBIC ratings for the fifty-five children were then determined.

While not establishing a causative relationship, the results of the study indicate that there is an association between increased lead concentrations and behavioral deficits in children. The children identified as having behavior problems by their teachers and through WPBIC scores had significantly higher lead levels than the control group. Furthermore, the study's correlational data indicate that an increase in lead levels resulted in higher scores on the WPBIC particularly in distractibility, aggression, disturbed peer relations, and immaturity. These adverse effects, moreover, seem to have arisen from lead exposures that are lower than the levels usually defined as dangerous. Thus, the authors conclude, a continuing reexamination of lead poisoning levels is needed in order to determine what role lead may play in the etiology of children's behavioral problems.

Marlowe, M. & Errera, J. **Low Lead Levels and Behavior Problems in Children.** *Behavioral Disorders,* May 1982, 7(3), pp. 163-172.

[redacted]

The **Behavioral Deviancy Profile** is an assessment device developed to measure the degree of deviance or disturbance of children and adolescents, ages 3-21, with moderate to severe emotional and social problems. This instrument assesses 18 areas of child development: physical growth, gross motor development, fine motor development, motor activity, sensory perception, cognition, intellectual, speech, language, affect, aggression, relationship-mother, relationship-father, relationship-siblings, relationship-peers, relationship-adults, ego-self and superego-conscience. A mental health and/or educational staff looks at the total functioning of the child, making observations of behaviors in a variety of situations and tasks. This activity also provides professional staff members with a training method and a means of upgrading their observational competencies.

Several aspects of behavior are taken into account when the child is assessed: severity of behavior, duration of behavior, and age appropriateness of the particular behavior being evaluated. Judgments about specific behaviors are made on a numeral rating scale, reflecting deviancy from a norm. This graphic depiction of a child's behavioral characteristics profile can then be used to compare deviance of physical, psychological and social factors. The profile can also be utilized to document changes in behavior before and after intervention. Reliability and validity data are included in the manual.

Stoelting Co., 1350 S. Kostner Ave., Chicago, IL 60623. 1980. Complete Set $12.00.

PRISE is federally funded through the Pennsylvania Department of Education, Bureau of Special Education, Harrisburg, Pennsylvania. The local education agency sponsoring PRISE is the Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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issues and happenings in the
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no. 14, december 1982

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ROBERT G. SCANLON—Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN—Chief,
Division of Federal Programs and Special Projects

APPLICATIONS OF SMALL COMPUTERS IN THE EDUCATION OF THE BLIND

David Holladay
RAISED•DOT•COMPUTING
Lewisburg, Pennsylvania

Blind persons have more to gain than sighted persons from the computer revolution in several ways. Increasing numbers of computer-based tools for the blind are being created which expand the potential capabilities of a blind person who is connected to a computer. At the same time the number of job functions which involve communication between computers and humans is constantly growing. These two trends reinforce one another to create ever-expanding job horizons for the blind.

From this glorious promise and potential comes a wrenching reality which educators must face: adapting small computers for disabled students in a school setting is very, very difficult. Since the use of microcomputers in our schools is a recent development, most schools do not have the resources to fully utilize the existing systems. Suggesting that special education teachers adapt their schools' microcomputers for disabled students when the science teachers are still scratching their heads is quite unreasonable. However, I am not asking that people do the impossible. All I am suggesting is that special education teachers become aware of what others in the field are doing in order to take advantage of their work. It takes a lot of time, money, and specialized knowledge to be a pioneer in this area. These are all elements in short supply today.

Select Proper Computer

Before I proceed any further, I have to get a little technical. There are many types of small computers in use in our schools at the present time. However, only one, the Apple II, has been found to be easily adaptable for disabled persons. The Apple II is constructed with eight slots in the back which may be used for plugging in additional devices. The manner in which this is arranged makes it particularly easy to adapt the computer to meet special needs. It is a mistake for one to go into a computer store and ask, "What is the best computer around for my budget?" It is more appropriate to first make inquiries as to what computer other persons are using to accomplish similar purposes.

In order to discuss computers, it is inevitable that one use the words "hardware" and "software." Hardware is the physical equipment; software is the programs which are used on the equipment. If one were evaluating a person, one might think of hardware as such physical properties as strength, speed, eyesight, hearing, or endurance. Software is the knowledge that enables the person to use these abilities. Hearing is useless without the "program" to decode human speech. Eyesight is useless without a multitude of programs to decode the input, including the program to read print. Physical movement is useless without the program to coordinate movement with sensory positional data, so you don't trip over yourself trying to make a single step.

Similarly, a computer is just a pile of electronics until you add the programs that allow it to do the things you want. Which brings us to the question, "What do educators want the computer for, anyway?" Small computers are being introduced into the schools for a number of reasons. One is simply to familiarize the students with computers. Another reason is that computers make excellent teaching machines. Since virtually every computer used in an elementary school utilizes a keyboard and a screen, this can present a problem for the visually impaired user.

Two Methods Utilized for Blind

There are two ways in which computer output can be made accessible to blind persons: voice output and braille output. Voice output is an inexpensive option for many small computers, certainly for the Apple II. Currently, braille machines carry a stiff price tag, although this may soon change.

Even voice output devices can be disappointing. You may buy a box which will run voice output, plug it into the computer and successfully run the demonstration program. Then what do you do? The voice box is of little use if the available software will not divert characters from the screen to the voice output. The Sensory Aids Foundation of Palo Alto, California is applying for a grant to adapt a broad range of existing educational software for voice output. If the grant goes through, blind students will be able to use the same programs as sighted students. This is an exciting development, and I urge interested teachers to get in touch with the Sensory Aids Foundation.

I know of two institutions that are currently working on the problem of how best to introduce blind children to computers. One is the Microcomputer Project at Vanderbilt University, which is headed by Dr. Ashcroft and Susan Williams. The Project has a lot of equipment, and staff members are evaluating how children interact with it.

Frank Irzyk of the New York Institute for the Blind has made a commitment to make its computer accessible to its blind students. The Institute has an Apple computer with voice output and a braille output device. Some text-editing software which has built-in braille translators has recently been purchased. Soon the Institute will be able to quickly provide text to the students in an electronic braille format. The Institute also has an inexpensive program called "The Electronic Blackboard." It uses the Apple keyboard like a Perkins seven-key keyboard for braille input. Any text or math equations brailled into the keyboard can be instantly displayed on the TV screen. This is useful in any situation where a blind person needs to communicate work to a sighted audience (such as a blind student with a sighted teacher).

Project for Electronic Braille Textbooks

The R.E.B. project run by Conchita Gilbertson in Virginia is using Apple computers to prepare electronic braille textbooks for blind junior and senior high school students. It is part of a larger project to test the distribution of textbooks in a VersaBraille cassette format (a cassette which can be read by the VersaBraille paperless brailler). The project is just now in the process of determining if it is easier to input the text into an Apple computer rather than have transcribers working directly with the VersaBraille.

By far the easiest form of computer input occurs when the desired text is already available on a computer disk form. I have convinced Apple computer to send me the texts of their manuals on disk form. I ran these through my programs to get well-formatted grade two VersaBraille cassettes. I distribute Apple manuals on VersaBraille cassettes for the same cost as the print copies.

There are two vendors who provide inexpensive text editing programs for the blind. A text editing program allows a user to type in text, make corrections, and get a printout of the corrected version. One vendor is Computer Aids, run by Bill Grimm, whose program "DOCUMENTS" uses the Echo II voice synthesizer. My own program "BRAILLE-EDIT" uses either voice output or braille output. Of the two systems, I would recommend Grimm's for a school setting, except when braille facilities are desired.

Despite the cost advantage of voice output, I am a big fan of braille, since it has some distinct advantages over voice systems. Braille teaches valuable literacy skills, such as learning correct spelling, learning how to locate a section of text on a page, and learning how to read one's own thoughts. In fact, a persuasive argument can be made that growing up without a system of reading and writing (such as braille) constitutes illiteracy.

Braille Devices Expensive

As I have mentioned, computer driven braille devices tend to carry a stiff price tag. Let me quickly review what is presently available. A braille printer costs around $15,000. I have heard of a new machine from Quebec for $7,000, and rumors of a European machine for $3,000. A braille printer operates just like a regular printer, except that it embosses paper instead of leaving ink on it.

Another type of braille output is paperless braille or electronic braille. These machines have a display of 20 or so braille characters which are driven by a computer. Instead of embossing paper, they move little pins up from a metal plate to simulate braille. The best known paperless brailler is the VersaBraille, made by Telesensory Systems, which costs $7,000. If you have access to one of these machines, you can accomplish a great deal with the Apple II computer. I have written programs to allow a teacher to enter text into the Apple, which will generate a grade-two VersaBraille cassette. Or a blind student can write material in grade-two braille and produce a printout in regular text for the teacher.

There are a number of other devices or approaches that can generate braille for less cash outlay. Some of these projects are not yet completed, and some require some tinkering.

Tim Cramner of the Kentucky Bureau for the Blind has designed a modification for the manual Perkins braillewriter. You can get the plans for $10, and then you need about 40-80 hours of experienced technician time plus $600 worth of parts, in addition to the Perkins. I understand that this device will be made commercially by Maryland Computer Systems for under $3,000. This is an excellent design, making a full braille computer terminal.

Another approach is to utilize an old IBM braille typewriter and add about $700 worth of commercially available interface equipment. I have written the necessary software so the Apple can generate proper computer braille or grade two braille from such a combination. If you have one of the IBM typewriters lying around gathering dust, this is a worthwhile project.

An additional possibility is to make some very simple modifications to the Diablo printwheel printer to make it generate braille. I have modified Bob Stepp's software to get the printer to generate proper braille. This approach is slow, generates poor quality dots, but is virtually free if you have a Diablo already connected to an Apple computer. The AFB is working on a new tactile output device which may prove to be effective and inexpensive. A unit cost of $3,000 is projected for a board with thousands of computer-driven tactile dots.

These different approaches are just now leaving the tinkering stage. I hope that this technology will soon be packaged so that individuals, agencies and schools can have cheaper access to computer-driven braille devices.

The field of small computer applications for the blind seems to change month by month. I strongly urge schools to pay attention to what is going on and to get involved. I do not mean just by paying lip service to the idea that computers represent the future of the current generation. Small computers can help solve today's communications problems in the classroom. I welcome comments and inquiries. Please send a self-addressed envelope to David Holladay, 310 S. 7th Street, Lewisburg, PA 17837, for addresses and more information about the individuals and groups mentioned in this article.

Increasing Reading Speed Using the Optacon

With the development of the Optacon (Optical to Tactile Converter), direct access to virtually all printed materials has become a possibility for the visually impaired individual. A serious limitation to its more extensive utilization, however, has been the low reading rate achieved with existing methods of training. With this problem in mind, researchers at the University of Arizona devised the following experiment to investigate ways of increasing the speed of reading using the Optacon.

Nine totally blind adults ages 22 to 49 were asked to participate. All had completed at least two years of college and had received a minimum of forty hours of initial training with the device. To achieve their objective, the researchers constructed three types of instructional materials which were presented sequentially in three instructional stages. In the first stage, the training material was based on the linguistic structure of language. In this variation, the subjects had to focus on the functional rather than the grammatical correctness of the language when reading. In the second stage, the materials were based on the cloze procedure. In this variation, the participants had to use graphic, syntactic, and semantic clues to generate words for omitted units in various reading passages. In the final stage, a set of materials consisting of passages of various lengths were presented simultaneously on prerecorded cassette tapes and in printed form. In this phase, each participant was instructed to try and catch up with the recorded materials while reading the printed version with the Optacon. All subjects had a total of 24 hours of instruction and 24 hours of practice over the course of the study. To analyze the effects of the intervention strategies, a within subject multiple baseline design was employed.

An overall inspection of the data indicated that there was a considerable increase in the reading rates for each subject from baseline to the end of intervention; that the overall reading errors were decreased; and that subjects with higher braille reading rates had higher oral reading rates with the Optacon. From this, the researchers conclude that visually impaired individuals reading with the Optacon can increase their reading rate and decrease the oral reading errors through systematic intervention beyond the initial training which is currently provided by many Optacon programs.

Terzieff, I., Stagg, V. & Ashcroft, S. C. **Increasing Reading Rates with the Optacon: A Pilot Study.** *Journal of Visual Impairment and Blindness,* January 1982, 76(1), pp. 17-22.

[redacted]

Couvillon, Lawrence & Tait, Pearl. **A Sensory Experience Model for Teaching Measurement.** *Journal of Visual Impairment and Blindness,* September 1982, 76(7), pp. 262-268. The authors describe a model developed for teaching the concept of length in grades K-8, with additional suggestions for teaching children to understand the concepts of area, temperature, capacity, weight, volume, angles and money or value. The model is designed to help children, particularly the visually impaired, overcome difficulties in learning measurement and estimation due to a lack of direct sensory experience with those qualities they are asked to measure. The Sensory Experience Model provides the teacher with a developmental sequence, not generally included in textbooks, for the achievement of measurement skills through concrete, sensory experiences. Such skills are vital since they provide a foundation for more complex mathematical operations and are constantly used in daily life.

Gardner, Laurence. **Understanding and Helping Parents of Blind Children.** *Journal of Visual Impairment and Blindness,* March 1982, 76(3), pp. 81-85. This article describes the parallel between the psychological stages of adjustment of a newly blinded person and the stages of adjustment experienced by parents of the blind. Discusses some reasons why parents choose to have children, parental reactions to having a blind child and the effects of parental attitudes on the child. Also discusses societal attitudes toward disability. Outlines counseling and educational strategies that can be used to help parents who have blind children. Methods included are group therapy as opposed to client therapy, and the rational emotive therapeutic approach.

Hanninen, Kenneth A., ed. **The Horizons of Blindness.** Blindness Publications, P.O. Box 28014, Joyfield Station. Detroit, MI. 1982. 143 p. $9.95. This book is a compilation of individually authored chapters written by educators. The contents are directed toward promoting a better understanding of the visually impaired and offer specific suggestions for teaching methods in mathematics, science and art. Three chapters are devoted to a discussion of attitudes towards blindness. Other topics covered are: physical education, recreation and extracurricular activities, combining mobility training with vocational exploration for the multiply handicapped, and the impact of technology on educating the blind. Illustrations accompany several of the articles in the book.

McGee, Lea & Tompkins, Gail. **Concepts About Print for the Young Blind Child.** *Language Arts,* January 1982, 59(1), pp. 40-45. This article discusses the problems young blind children encounter at the beginning reading level, including a description of concepts about print. The authors state that children need to learn directionality and become word conscious before learning to read. Blind children are not exposed to a world full of braille symbols, as sighted children are to print. With the passage of P.L. 94-142, blind students are frequently participating in regular classes; pre-reading activities are described to accommodate the young blind child's needs. Directions are included to adapt these activities to accentuate blind students' tactile abilities. These include: tactile books, ideas for art work, cooking, interlined books and play kits.

Newman, S. E. & Hall, A. D. et al. **Factors Affecting the Learning of Braille.** *Journal of Visual Impairment and Blindness,* February 1982, 76(2), pp. 59-64. This article describes three experiments that were conducted with sighted students learning braille symbols. The subjects' task was to learn the names of certain symbols in the braille alphabet. In experiments 1 and 2, visual examination of the symbols during study trials facilitated learning. Subjects who studied visually but tested haptically learned more quickly than those who studied haptically and were tested through the same mode. Similar results were obtained in experiment 3, using standard size braille symbols. There were no effects when large braille symbols were used. Conditions of the experiments and implications of the results are fully explored.

Olson, Myra & Mangold, Sally. **Guidelines and Games for Teaching Efficient Braille Reading.** American Foundation for the Blind, 15 W. 16th St., New York, NY 10011. 1981. 109p. $7.50. This book is written for parents, vision teachers and regular classroom teachers, providing them with ideas to adapt a general reading program for braille readers. Includes activities and games for enrichment purposes. Activities are developed to be used with preschool students through third grade but can also be used with remedial readers of any age. Chapter 1 discusses competencies needed by the instructor teaching a child to read braille. Other chapters include background information on braille reading and preschool experiences important for reading braille. Contains non-factual questions which can be applied to reading material, a diagnostic assessment of braille reading skills, worksheet ideas and an index of materials and publishing companies.

Skrtic, T. M., Clark, F. L. & White, W. J. **Modifications of Attitudes of Regular Education Preservice Teachers toward Visually Impaired Students.** *Journal of Visual Impairment and Blindness,* February 1982, 76(2), pp. 49-52. The effectiveness of two intervention strategies on the attitudes of regular education preservice teachers toward visually impaired students is compared in this study. One group of teachers received cognitive information about visually impaired individuals, and a second group received information in combination with personal contact. Results indicate the importance of personal contact with the visually impaired. This article also discusses the unexpected finding that reported attitudes of trained professionals who serve visually impaired students were not significantly different from a group who received information only. Reasons for this finding are also discussed.

[redacted]

The **Hill Performance Test of Selected Positional Concepts** is an individually administered test developed to evaluate specific positional concepts with visually impaired children. The test consists of 72 performance tasks classified into four parts that assess the child's ability to: identify various positional concepts by requiring the child to touch the appropriate area of the body specified by the examiner, demonstrate the positional relationship between selected body parts and their movements, demonstrate the positional relationship between body movements and objects, and move objects in relationship to each other.

The test is designed to be used by orientation and mobility specialists, teachers and other professionals working with visually impaired children with the following characteristics: legally blind, congenitally blind, between the ages of 6 and 10, with basic receptive language abilities, mobile and flexible enough to perform the test items from a physical standpoint, and with knowledge of basic body parts. The body parts included are: face, leg, neck, hand, elbow, thumb, heel, head, ear, shoulder, nose, finger, knee, toe, eye, tummy, and back. Since the test requires that children have basic receptive language skills, ambulation, and body flexibility, it would not be suitable for severely-profoundly retarded children and children confined to wheel chairs. The test may be used as a criterion-referenced instrument or as a norm-referenced test.

Stoelting Co., 1350 S. Kostner Ave., Chicago, IL 60623. Complete Set $13.00.

[redacted]

Penny and Ann is a film that illustrates how blind people can learn to become relatively self sufficient. In addition, it helps to alleviate the sense of difference held by both the sighted and the blind themselves. This film depicts Penny in a two year training program at a rehabilitation center. She and Ann, her young inexperienced therapist, learn together the wonderful ability of the blind to become actively involved socially, and personally self sufficient. Throughout the film Penny reveals her feelings, from her early fears of rejection as a blind person to the final joy of success in an active daily life made possible through those who helped her. Ann also reveals her feelings as she faces the trials of a new therapist and instructor. The fascinating details of how Penny learns to sew, cook, walk, type, attend a ball game, apply lipstick and many other taken-for-granted skills, help every viewer, blind or sighted, to better understand the everyday lives of the blind.

16mm/color/sound/19 minutes/1981/$315.00

Aims Instructional Media Services, Inc., 626 Justin Ave., Glendale, CA 91201.

[redacted]

A Little Bit More Than Love is an eight minute audio/visual presentation for parents of visually impaired, preschool children. The presentation contains simple, straightforward suggestions of how parents can learn to help their children as well as themselves. It shows parents and children interacting in different situations and how the parents bring their children to the world. The material also describes the kind of resources available and discusses how parents can become partners with professional educators in developing their children's potential.

American Foundation for the Blind, 15 W. 16th St., New York, NY 10011. 1981. $40.00 (Color/set of slides with cassette).

PRISE is federally funded through the Pennsylvania Department of Education, Bureau of Special Education, Harrisburg, Pennsylvania. The local education agency sponsoring PRISE is the Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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PRISE reporter

issues and happenings in the
education of the physically handicapped
no. 14, september 1983

pennsylvania resources and information center for special education 1013 West Ninth Avenue, King of Prussia, Pa. 19406. 215/265-7321

ROBERT WILBURN–Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN–Chief,
Division of Federal Programs and Special Projects

SCIENCE EDUCATION AND THE HANDICAPPED

Helenmarie Hofman, Ph.D.
Director, Member Services
National Science Teachers Association
Washington, DC

Our hopes were high in the early 70's. In the mid 70's we began to see a breakthrough. At long last some attention was being paid to science education in relation to handicapped students. The National Science Foundation began funding projects designed to expand participation of the physically handicapped in scientific careers. Other science projects were funded which included students with learning disabilities and other handicaps. In 1977, the National Science Teachers Association was awarded a project grant which facilitated the first working conference on science education for the physically handicapped. The underlying philosophy, which provided a basis for that conference as well as for NSTA's position statement on science for the handicapped, is as follows:

> *A handicapped person functions at his/her optimum level in an environment and lifestyle as close to normal as possible. Science is a vital part of that environment and lifestyle. The well over 800,000 physically handicapped students in the United States and the over 3 million mentally handicapped students have the right to the least restrictive, most appropriate education. This education, as authorized by Congress in P.L. 94-142, includes the right to assistance in obtaining a science education and to pursue careers in science or science-related fields. The ultimate goal is to provide quality science education for handicapped students.*

Evidence presented at this first science education conference indicated that handicapped children are interested in and capable of learning science. Since they have similar needs to those of non-handicapped students, it is necessary that equal education opportunities be offered to them. Although the recommendations from this conference would be somewhat costly, failure to meet these obligations might prove more costly in terms of the loss of handicapped individuals' contributions to science and society. The societal loss would be professional, human, and economic.

From the mid-70's and into the early 80's, great strides continued to be made in providing science education for the handicapped. Not only was the National Science Foundation funding a springboard for developing model projects, many of which are in use today, but there were other breakthroughs such as the White House Conference on Handicapped Individuals. This conference provided a compilation of information concerning the aspirations, abilities, and problems of physically and mentally handicapped Americans of all ages, races, beliefs, educational levels, income brackets, and ethnic origins.

It became evident that science must be an integral part of the education of all handicapped students from kindergarten through high school. Teachers using multisensory instructional techniques and laboratory centered programs can effectively teach handicapped students in either regular or special classes. However, there still exists, almost a decade later, the need for dissemination of information to teachers of the handicapped concerning science materials, teaching aids, techniques, conferences, workshops, etc.

When professional educators embarked on research in the area of science education for the handicapped, they knew it would take a long period of time as well as support from the public, private, community, and education sectors. However, they did not get the time needed to develop and implement the types of programs necessary to insure that science education would become an everyday occurrence for the handicapped. It became apparent in the early 80's that cutbacks in federal spending and a switch from categorical funding to block grants would deal a severe blow to this goal.

Science Education Not Fully Developed

At this point, let me divert and focus on the plight of science education in general. Science education received a gigantic boost with the launching of Sputnik in 1957. At that time it was found that our students were obviously behind in science and mathematics, and large amounts of money were put into curriculum development and teacher training. During the period between Sputnik and our landing on the moon, outstanding programs were developed in science and mathematics education. However, these programs were, for the most part, focused on producing "big and little scientists." The next logical step was neglected: the development of curricula to address the goal of scientific literacy for the entire citizenry. From the moon landing, through a period of reduced space exploration, and into the age of the space shuttle transport system, we find that science has not in fact become an important component of the curriculum for either non-handicapped or handicapped students.

Since it is apparent that another "Sputnik" has been launched, there is once again an awareness that our students are inadequately trained in mathematics and science. The reaction has made its way to Washington, and the problem is receiving attention from the private, public and educational sectors. There are bills in Congress which address the needs in science and mathematics education. One House bill provides for over $400 million for personnel training, equipment, scholarships for preservice teachers, as well as an emphasis on producing scientific manpower. There are ten similar bills in the Senate. As we monitor this legislation, we need to make sure that our handicapped student population is recognized as the valuable resource it is and that any programs being developed also address the needs of this group.

The present administration proposed the weakening of the language in Section 504 and P.L. 94-142, the comprehensive federal laws guaranteeing the rights of handicapped individuals to services and protecting them from discrimination. However, the releasing of those new proposed guidelines resulted in numerous negative responses, and at this time the laws remain unchanged. It is now very apparent that vigilance is needed, and that we must make our voices heard concerning the rights of our handicapped students in general and in specific their right to a science education.

Many Excellent Science Programs Still Exist

In order to assist you in meeting the needs of your handicapped students in science, I am including a brief overview of a few excellent programs which are representative of many of those still in existence across the country. Examples chosen cover the areas of teacher inservice, curriculum development, resources, and student programs.

Teacher Inservice

The **Science for the Handicapped Awareness Conferences** for teachers of exceptional children, and similar conferences for the teachers of science, comprise a joint NSF information dissemination project on science education for the handicapped. The Director, Charles R. Coble, is a staff member in the Department of Science Education, East Carolina University, Greenville, NC 27834. These conferences have been very successful, not only in North Carolina, but also in six other states. Such a conference includes the following: a variety of demonstrations, for example, chemistry for the blind; career education, such as science for the deaf; presentation of curriculum projects for physically handicapped students, learning disabled students and emotionally disturbed students; sharing and discussion sessions; and sessions addressing current events at federal and state levels.

Another model for inservicing teachers is the development of **Science for the Handicapped Teacher Training Centers** in Milwaukee, Wisconsin. The Director of this successful project is Richard Knapik, Milwaukee Public Schools, Department of Elementary and Science Education, P.O. Drawer 10-K, 5225 W. Vliet Street, Milwaukee, WI 53201. Each Center (elementary, middle school and secondary school) provides a half-day of regular science classes. These classes have a mixture of 20 percent handicapped students to 80 percent nonhandicapped and provide the setting where teachers can gain practical experience with students while learning to adapt the curriculum and methods to teach science to the handicapped. Not only do the classes help the regular classroom science teacher to modify hands-on laboratory equipment for the blind, deaf, and physically handicapped, but also they help teachers of exceptional students to teach science as well as develop materials to fit the curriculum of a self-contained special education classroom.

The **Milwaukee Public Schools** have video tapes available demonstrating the teaching of science to the handicapped in a variety of classrooms. Also numerous handbooks are available, such as one that assists the regular classroom teacher in working with exceptional children in science and another that serves as a resource for the regular classroom teacher who has a handicapped student in a science class.

Curriculum Development

Among the many curriculum materials which have been developed and tested, are those from Project ECSEP, **Science for the Learning Disabled.** These science units, in kit form, were developed by the staff from the Charlotte-Mecklenberg Schools, P.O. Box 149, Charlotte, NC 28230, under Director Charles Vizzini. **Developing Coping and Cognitive Skills through Science,** a collection of kits for regular and exceptional children in grades 4-8, as well as science for learning disabled students using microcomputers, can be obtained from Charles Coble of East Carolina University (address above). An annotated bibliography of **Sources of Teaching Science to the Handicapped** can be ordered from East Carolina University at cost ($1.00). For information about **Science Enrichment Programs for Students with Physical Handicaps,** contact the Center for Multisensory Learning, Lawrence Hall of Science, University of California, Berkeley, CA 94720.

Resources

A major science education resource is the **Science for the Handicapped Association** (SHA), which has been in existence for over 10 years. Among its goals are the following:

- Promotion of science for all handicapped students in our schools.
- Dissemination of information for science education for the handicapped student.
- Publication of a newsletter 3-4 times per year.
- Publication of a bibliography on science for handicapped students.

Copies of their newsletter, bibliography and other information are available from Dr. Benjamin Thompson, University of Wisconsin-Eau Claire, Eau Claire, WI 54701.

Student Programs

The **Project on the Handicapped in Science,** the American Association for the Advancement of Science, 1776 Massachusetts Avenue, NW, Washington, DC 20036, has taken the view that science is everywhere, science is in everybody's life, and science is for everyone. Their **Within Reach: Out-of-School Science Opportunities for Youth Program** has produced a guide for students with handicaps, their parents, teachers, and counselors. The guide offers descriptions of out-of-school science programs, strategies on how programs can include handicapped young people, where to find such programs, how to create new science programs for students, and suggestions for program adaption to meet the needs of handicapped students.

INSTRUCTIONAL MATERIAL

The Physical Disabilities: A Resource Package for Practitioners, Counselors, and Trainers. This is a multimedia kit designed to assist professionals in understanding diseases and the related systems and body functions as they pertain to the vocational and personal goals of their handicapped clients. The instructional package includes:

- A Medical Aspects of Disabilities Resource Manual which describes skeletal, muscular, nervous, circulatory, respiratory, digestive, endocrine, reproductive, integumentary system, ears, eyes and neoplastic diseases.
- A set of five specific disability vest pocket training books covering topics such as stroke, cerebral palsy, epilepsy and amputation.
- Five audio cassettes with simulated interviews with individuals having each of ten specific disabilities and how these disabilities affect them.

Center for Training and Development, Multi-Resource Center, Inc., 1900 Chicago Ave., Minneapolis, MI 55404. 1976. $55.00.

CURRENT CITATIONS

American National Standards Institute, Inc. **American National Standard Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People.** American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018. 1980. 68 p. $4.00. This guide supersedes the 1971 edition and supplements additional American National Standards publications relating to various aspects of buildings and facilities. Its specifications are recommended for adoption in order that individuals with physical impairments may more easily pursue their aspirations, develop their talents and exercise their skills. An appendix is included that contains detailed background information to assist the designer in planning for maximum accessibility.

Aylor, J. H., et al. **The Impact of Microcomputers on Devices to Aid the Handicapped.** *Computer,* January 1981, 14(1), pp. 35-40. The utilization of microcomputers to facilitate the production and use of devices to aid the handicapped is discussed in this article. Microprocessors can be highly valuable in reducing the cost and increasing the flexibility of such devices as powered wheelchairs, prostheses, manipulators and environmental control systems. In many cases microcomputers can replace complicated electronic systems and make sophisticated control concepts feasible. The authors also discuss the potential impact of the microcomputer on independent living, employment and the clinical evaluation of the handicapped.

Bishop, D. S., ed. **Behavioral Problems and the Disabled.** The Williams & Wilkins Co., 428 E. Preston St., Baltimore, MD 21202. 1980. 473 p. $39.00. This book provides a practical approach to the management of the psychosocial aspects of the chronically ill and the physically disabled. The eighteen contributing authors were selected because of their unique knowledge of their fields and their ability to translate it into the context of disability. The focus of the material is on those problem areas sometimes encountered by the disabled, such as depression and suicide, anxiety, drug and alcohol problems, psychoses, sleep and pain, and family relationships. Each chapter represents a fresh and first attempt to synthesize a problem in relation to disability.

Bullard, D. G. & Knight, S. E., eds. **Sexuality and Physical Disability: Personal Perspectives.** The C. V. Mosby Co., 11830 Westline Industrial Drive, St. Louis, MO 63141. 1981. 318 p. $17.95. This book contains a collection of essays contributed largely by disabled people, who discuss their personal perspectives on sexuality. In the first section of the book, viewpoints are expressed by persons with various disabilities such as spinal cord injury, cerebral palsy, genetic disability and visual impairment. There are units on individual and family perspectives as well as women's issues. The second part of the book presents discussions by professionals in the fields of sexuality and disability who serve the physically handicapped. A list of service agencies and a selective bibliography are included.

Hale, Glorya, ed. **The Source Book for the Disabled.** W. B. Saunders Co., West Washington Square, P.O. Box 416, Philadelphia, PA 19105. 1979. 288 p. $14.95. This volume is a graphically illustrated guide to easier and more independent living for physically disabled people and their families and friends. It is addressed directly to such persons and explores attitudes and available options as well as illustrating the kinds of aids which can make life fuller, more comfortable and more independent for them. Among the chapter topics are the home, personal needs, sexuality, leisure and recreation, the disabled parent and the disabled child. Legislation affecting the disabled and its implementation are discussed. Also included is a resource section which lists published materials and contains a guide to organizations, government agencies, special interest groups and clubs, and commercial sources of aids and equipment.

Schwejda, P. & Vanderheiden, G. **Adaptive-Firmware Card for the Apple II.** *Byte,* September 1982, 7(9), pp. 276-314. A low-cost adaptive-firmware card is described that can be inserted into an Apple II microcomputer to provide a variety of input routines for the handicapped including scanning, Morse Code and direct selection techniques. In addition to providing keyboard input, the card can also simulate the use of game paddles and switches for utilization by disabled persons. With the aid of this card the severely disabled person can gain complete access to the Apple II microcomputer and its software.

RESEARCH BRIEF

Study Analyzes Withdrawal of Anticonvulsant Drugs

Most of the research on the prognosis of childhood epilepsy has dealt with the control of seizures by anticonvulsant drugs. Few investigators, however, have addressed the question of what happens to children when the anticonvulsant medication is withdrawn. Now a team of researchers at the Seizure Clinic of St. Louis Children's Hospital has attempted to answer this dilemma. Writing in the *New England Journal of Medicine,* the group, headed by Jean Thurston, reports the results of their follow-up study of 148 children who were treated with anticonvulsants but were able to discontinue the therapy. Each patient was observed for an average period of eighteen years, and observations were recorded on such factors as: age of the patient at the time of onset, severity of epilepsy and duration of seizures, years on anticonvulsant medication before withdrawal, and possible neurological dysfunctions. The data was then analyzed to determine statistically which elements were most closely associated with relapse.

After studying the records in each patient's files, Thurston's associates found that, in a 15-to-23-year follow-up study, seizures recurred in 28 percent of the 148 children after withdrawal of anticonvulsant medication. That is, 41 patients out of the original group had in fact relapsed into recurrent seizures. Moreover, two-thirds of the relapses occurred in the first two years of drug withdrawal and 85 percent in the first five years.

A comparison of persons having relapses with those who had none revealed several potential predictive factors, according to the St. Louis group. For instance, a long duration of epilepsy before control was achieved seemed to indicate lessened chances for permanent control without anticonvulsants. Neurological dysfunction and jacksonian seizures also seemed to be related to potential recurrence. Number of seizures prior to control, age at onset, family history, and electronencephalographic abnormalities appeared not to be relevant. Thus persons having none of the stated associative factors, the authors conclude, will have an excellent chance of remaining free from anticonvulsant therapy once it is withdrawn.

Thurston, J.; Thurston, D.; Hixon, B.; & Keller, A. **Prognosis in Childhood Epilepsy.** *New England Journal of Medicine,* April 1982, 306(14), pp. 831-836.

TEST

The **Miller Assessment for Preschoolers (MAP)** is an individually administered screening instrument which provides a comprehensive overview of the developmental status of children, ages 2 years - 9 months, to 5 years - 8 months. The test consists of 27 items, sampling many behavioral domains, which are grouped under three general categories: Sensory and Motor Abilities, Cognitive Abilities, and Combined Abilities. The **MAP** is designed to be sensitive to moderate, as well as severe developmental delays and can be administered and scored in 20 to 30 minutes by psychologists, physicians, occupational and physical therapists, speech pathologists, nurses or teachers. Specialized training is not required to administer the **MAP**, but one needs a familiarity with the general procedures of standardized testing and experience with preschool children.

By comparing a child's score to standardized norms for other children in the same age group, an examiner may identify children in need of further evaluation. The total score can also be subdivided into Performance Index scores and compared to those of other children to help identify those aspects of development which require more indepth assessment. Early identification and remediation of existing pre-academic problems will help to alleviate potential primary school difficulties.

The Foundation for Knowledge in Development, 1901 West Littleton Blvd., Littleton, CO 80120. 1982. Complete Set $205.00.

DISSEMINATION HAPPENINGS

National Diffusion Network

The following programs are available for adoption or adaptation through the National Diffusion Network (NDN). For further information on these or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (RISE), 725 Caley Road, King of Prussia, PA 19406. Telephone, 215/265-6056.

ACTIVE: All Children Totally Involved Exercising

Project *ACTIVE* is a diagnostic/prescriptive physical education program developed to serve handicapped individuals, but which is equally successful with slow learners, normal and gifted children. *ACTIVE* offers a training program to provide teachers with the necessary skills for implementation, and curriculum materials addressed to the entire gamut of handicapped conditions.

Each student is given an individualized prescription designed to meet his or her particular needs. Each prescription includes exercises and tasks at which the child can succeed, assuring a sense of personal achievement as well as remediation. Some group activities are also included which help foster leadership.

Teachers are trained to assess pupil strengths and deficiencies and to prescribe motor, perceptual-motor, physical fitness, posture, nutrition, and diaphragmatic breathing tasks accordingly. *ACTIVE* is designed for handicapped individuals aged 6 to 60 and non-handicapped in grades K to 9.

NEW FILM

Sam is a film about a boy (approximate age, 12 years) who has cerebral palsy. The narrative depicts Sam's struggle to understand and to cope with people's negative reactions to him. This film can be used to sensitize children and adults to the problems that a physically handicapped youngster faces in attempting to gain the acceptance of peers and of adults outside of the child's immediate family. **Sam** is adapted from the book *Sam and His Cart* by Arthur Honeyman, himself a victim of cerebral palsy who grew up to become a successful author.

16 mm/color/sound/25 minutes/1982/$490.00

Barr Films, P.O. Box 5667, Pasadena, CA 91107.

Pennsylvania Resources and Information Center for Special Education (PRISE) is a project funded by the Pennsylvania Department of Education, Bureau of Special Education, through P.L. 94-142, and is administered, managed and supervised by Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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PRISE reporter

issues and happenings in the
education of the speech/hearing handicapped
no. 14, October 1983

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ROBERT WILBURN—Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN—Chief,
Division of Federal Programs and Special Projects

PRAGMATICS: STUDY OF THE FUNCTIONAL USES OF LANGUAGE

Annie Laurie H. Lehman, M.A., C.C.C.
Speech and Language Pathologist
Lansdale, PA

When one reflects upon the qualities of a smooth, effective and satisfying conversation, what comes to mind? First of all, those parties involved should have each perceived that there was successful interaction, leading to a feeling of closure, accomplishment or enjoyment. In addition, those basic "tools" which are employed for communication (vocabulary, grammar, and speech sound production) were used effectively, providing no distraction from the understanding of the message.

Moreover, the carrying out of what can be termed the "unwritten rules" of a particular discourse resulted in the use of the basic tools in a manner that was functional and appropriate to the topic or context. Even if one or both parties had difficulty pronouncing words, forming sentences or selecting vocabulary, the correct use of those rules which govern the functional use of language made it possible to achieve successful communication. This rule system, which delineates the functional use of language within a context, is known as PRAGMATICS.

Perhaps the best way to examine the components of pragmatics, which include **intentions, conversational constraints,** and **sociolinguistic aspects,** is by an example. The following is a hypothetical conversation. If this conversation takes place between you and a friend with whom you speak every two or three months, perhaps the language forms (vocabulary, syntax, phonology) you use would convey the following **intentions:**

	Intention	**Example**	
1.	initiating conversation	You (Y) telephone friend (F).	
2.	greeting	Y:	"Hi, how have you been?"
3.	response	F:	"Great! Busy. The summer went by too fast."
4.	request	Y:	"Yes. We really haven't had a chance to get together. How about dinner next Friday?"
5.	repeating	F:	"Dinner next Friday?"
6.	description	Y:	"Yes. We could meet for refreshments at our house and then go to a really unique restaurant in Chestnut Hill."
7.	protesting	F:	"No. Let's meet in Chinatown. That way, we can come straight from work."
8.	predicting	Y:	"The traffic may be bad that time of night."
9.	expressing reason	F:	"Yes, but there will be traffic anyway on the way home."
10.	making choices	Y:	"Okay, that's a better idea than Chestnut Hill."
11.	preclosing	F:	"Oh dear, the doorbell just rang."
12.	acknowledging	Y:	"I guess you better go."
13.	requesting information	F:	"Yeah. What time should we meet?"
14.	giving information	Y:	"Let's make it seven at the Imperial."
15.	closing	F:	"Great. It will be good to see you and talk. Thanks for calling."
16.	closing	Y:	"I'm glad I caught you. Good-bye."

The above conversation also contains a number of **conversational restraints,** such as: 1) turn-taking — answering questions and volunteering information without numerous interruptions; 2) topic specification — specifying the topic, maintaining it, and signaling a change in topic; and 3) clarification — requesting more information when the listener is not clear or satisfied.

If we look at the **sociolinguistic aspects,** we see that you and your friend demonstrate such social sensitivities as being polite, signaling changes in topic and communicating indirectly the need to sustain the friendship.

The above intentions, conversational constraints and sociolinguistic aspects are all parts of pragmatics. Just as a carpenter works with a set of tools, we as communicators work with a set of tools. The carpenter's tools have such arbitrary labels as hammer, saw, level, drill, etc. The communicator's tools have been given the following arbitrary names: phonology (rules governing our sound system), syntax (rules governing word order/grammar), semantics (vocabulary) and morphology (smallest meaningful words and word forms). Just as the carpenter chooses a tool to perform a certain function, we use our tools in a functional way. Our choices are determined by that set of rules which governs the use of language in that specific context.

Pragmatics Explores Language Use

Pragmatics has been coming to the forefront in speech and language pathology since the mid 1970's. It has evolved in order to facilitate the further exploration of how language is used. Practitioners of other disciplines also have an interest in pragmatics: sociolinguists, psychologists, child development specialists and others. The speech/language pathologist is particularly interested in the developmental sequence of pragmatics as well as the identification of difficulties people may have in this area. So far, the literature has been chiefly directed toward defining the term and its components. Because pragmatics has only recently evolved, the specific labels for each of the identified intentions, conversational constraints, and sociolinguistic aspects have not been totally consistent in the literature. The labels used in this article are those which have occurred most frequently.

The labeling of the components of pragmatics has furthered the study of the development of the functional uses of language in context. The fascinating result has been to obviate the fact that pragmatic development begins in the very early stages of a child's life. Before a child begins to use the heralded "first word," coactions are already taking place. The prerequisites for discourse and topic maintenance are evolving through the information sharing, joint attention, and joint activity of the child with the caregiver.

By 6 weeks of age, the child is establishing eye contact while the caregiver is talking. By 3 to 4 months of age, the child is looking in the direction of the object or action that the caregiver is talking about and/or pointing toward. This is known as "following the line of regard" and "joint referencing." Within 3 to 6 months of age, the child is anticipating events such as the behavior demonstrated during "peek-a-boo." Prerequisites to conversation participation are being developed as the child is taking turns during "peek-a-boo" or a similar game. The child is paying attention, responding, and waiting for the next "peek-a-boo!" Verbal turn taking begins around 9 to 18 months with babbling exchanges and first words.

The above events, and others, take place as prerequisites to the intentions outlined earlier in this article. By the one and two word phrase level of verbal acquisition, the child has learned to communicate most of the intentions. Prior to this, the child was learning the power in intentions through the preverbal activities. This power becomes integrated to the verbal stage and becomes more sophisticated in the verbal and nonverbal modes as the child grows. The whole notion of how and when pragmatics is developed is under study, and more research will be occurring during the 80's.

So, besides another fascinating and extremely creative area for speech/language pathologists and related professions to explore, what else does pragmatics hold for us? Certain trends are taking place in speech/language pathology which I feel are a direct result of the growing knowledge we are gaining about pragmatics. The following trends should be of interest to speech and language pathologists, educators, administrators and parents:

- Cooperative work with a child's teachers and significant others is becoming more necessary in order to better assess how well a child uses language in a context. We are beginning to find out more about *why* Johnny is not generalizing the forms or rules he has learned in speech/language therapy. Perhaps these rules have not been applied to the components of pragmatics.

- New methods of assessment are emerging. Pragmatics can be assessed in a systematic way. Imitative tasks do not always reflect a child's language system because rules of pragmatics are in effect. That is, responses are often conversational, rather than direct imitation.

- Speech and language pathologists are choosing between or combining two philosophies. One, the formalist, states that communicative competence is judged on the ability to produce, comprehend and judge grammatical structures. Two, the functionalist, states that communicative competence is rooted in social interaction and context. Selecting one of the philosophies, or combining them is impacting the speech/language pathologist's choice of assessment tools and remediation techniques.

- A need for inservice and self-training programs in pragmatics has become evident.

- Research within the context that children spend 75% of their time in school should become prevalent and preferred.

- Speech/language pathologists will be remediating language forms within a context rather than totally within a drill. Speech/language sessions will be designed for real talking, not just practicing answers.

REFERENCES

Arwood, Ellyn Lucas. **Semantic and Pragmatic Language Disorders: Assessment and Remediation.** Aspen Systems Corporation, Gaithersburg, MD. 1981.

Arwood, Ellyn Lucas. **Pragmaticism.** Aspen Systems Corporation, Gaithersburg, MD. 1981.

James, Sharon L. and Seebach, Martha A. **The Pragmatic Function of Children's Questions,** *Journal of Speech and Hearing Research,* Vol. 25, No. 1, March 1982.

[redacted]

Clown White is the story of Jason, a hearing impaired, emotionally disturbed child whose only mode of communication with his teacher and peers is through destructive behavior. During a school trip, Jason has the opportunity to interact with a mime. This encounter results in Jason making his first attempt to communicate verbally and to interact with his teacher in a positive manner. **Clown White** provides an excellent example of an alternative mode of instruction for a child for whom traditional teaching strategies are ineffective.

16 mm/color/sound/51 minutes/1981/$799.00
video/$479.00

Perspective Films, 369 W. Erie St., Chicago, IL 60610.

[redacted]

Auditory Skills Curriculum Assists with Communication

The Auditory Skills Curriculum was developed by audiologists and teachers of the hearing impaired and has been extensively field tested. Over 200 classroom activities are keyed to a curriculum of criterion-referenced objectives. The objectives map the progression and relation of elements of discrimination, memory sequencing, auditory feedback, and figure-ground abilities. Relating to each objective, there are: specific directions to the teacher on how to assess; performance criteria; assessment materials; and references. The classroom activities are keyed by suggested grade levels, give explicit directions for implementation and variations, and offer sources of instructional materials. The ASC provides a comprehensive guide to the development of functional communication, and is suitable for a wide variety of hearing losses, language levels, and ages. Progress records are designed to indicate student response to the IEP and suggest where changes are needed in objectives, materials, and activities.

Foreworks, Box 9747, North Hollywood, CA 91609. 1979. $30.00.

[redacted]

Tweedie, David & Shroyer, Edgar, eds. **The Multihandicapped Hearing Impaired: Identification and Instruction.** Gallaudet College Press, Kendall Green, Washington, DC 20002. 1982. 286 p. $14.95. Organized to meet the needs of students, parents, teachers, and administrators who deal with the multihandicapped hearing impaired population, this text is divided into four sections. Section titles are: Understanding the Population, Providing Comprehensive Programming, Developing the Curriculum, and Developing Language and Communication Strategies. Each section contains a number of articles contributed by professionals in the field.

Van Hattum, Rolland J., ed. **Speech-Language Programming in the Schools.** Charles C. Thomas, 2600 South First St., Springfield, IL 62712. 1982. 651 p. $39.75. This book is an updated and expanded version of the first edition, which was titled *Clinical Speech in the Schools.* It is intended as a practical, rather than theoretical, presentation of the different roles of specialists assigned to assisting students with communication disorders. Suggestions are provided in each chapter by persons working in this profession, as well as persons involved in school programming. Developing an effective, well-planned program is the focus of the book.

Cryan, John R. **Severe Hearing Loss in Infancy: Is Language Development Impaired?** *Childhood Education,* September/October 1982, 59(1), pp. 46-50. The impact of severe hearing loss in infancy on learning problems in later years is dealt with in this article. Studies involving severe ear infection, *otitis media,* indicate a correlation between this condition and language impairments. Considerations for parents and educators are presented. These include preventive measures through parent awareness, as well as parent programs for those with children affected by this condition. Other suggestions offered are preschool teacher training, inservice education and public awareness techniques.

Mowrer, D. E. & Case, J. L. **Clinical Management of Speech Disorders.** Aspen Systems Corporation, Rockville, MD 20850. 1982. 320 p. $27.50. This book is designed to provide practical information involving the management of communication difficulties. A brief review of articulation, voice and fluency disorders is included. The text is divided into three major sections. Section I reviews speech sounds and their development, assessment of articulation skills, and treatment procedures. Included in Section II are descriptions of adult voice disorders, vocal abuse, and physical disabilities affecting voice quality. Fluency disorders are covered in Section III, emphasizing treatment procedures for stuttering.

Erber, Norman P. **Auditory Training.** Alexander Graham Bell Association for the Deaf, 3417 Volta Place, N.W., Washington, DC 20007. 1982. 204 p. $14.95. Teachers, audiologists and parents of hearing impaired children will find this book helpful to them in developing their skills as auditory instructors. The author provides background information and auditory instruction strategies to assist in designing an aural communication program. Presents basic information regarding speech perception of hearing impaired, proposes a framework for establishing an evaluation and training program, and suggests methods for providing the hearing impaired with listening experiences.

[redacted]

National Diffusion Network

The following program is available for adoption or adaptation through the National Diffusion Network (NDN). For further information on this or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (RISE), 725 Caley Road, King of Prussia, PA 19406. Telephone: 215/265-6056.

Modification of Children's Oral Language

This project offers a special program for training staff to work with students (pre-school to adult) who have any language-learning disability, regardless of the reason. The language teaching program combines modern linguistic theory with advanced behavioral technologies applied to teaching. The curriculum and individual program design include child selection procedures, individual placement, automatic branching, and continuous data collection for output measurement. The project provides materials as well as assisting teachers with instructional strategies and techniques. (Developed in Eastern Pennsylvania through the Central Susquehanna Intermediate Unit).

Project VEEAP Materials Ready for Distribution

During 1982, a **Vocational Education Evaluation and Assessment Process (VEEAP)** for handicapped students was developed and field tested by the PDE Division of Research and Evaluation in cooperation with a team of special educators from Elwyn Institutes in Media, Pennsylvania. The materials resulting from this project are now available for free distribution to those interested.

The VEEAP provides a well-documented structured process for a team approach to collecting necessary evaluative information, recommending a vocational placement and defining support services and program modification in order to facilitate the success of handicapped students in vocational education. Single copies of the report which describes the development and field testing of the model, and/or the *VEEAP Procedures and Training Handbook* may be requested by contacting: Grace E. Laverty, Division of Research and Evaluation, Pennsylvania Department of Education, Box 911, Harrisburg, PA 17108.

[redacted]

Adapting the *WISC-R* for Deaf Children

The intellectual assessment of hearing impaired children typically requires administration modifications of the *Wechsler Intelligence Scales for Children - Revised (WISC-R)*, which is one of the most frequently used measures. Presently these modifications are left to the individual psychologist, thus making the reliability and validity of these alterations open to question.

A study conducted at the University of Tennessee, however, has attempted to develop and assess the impact of a standardized testing procedure upon the *WISC-R* when it is used with the deaf. Researcher Steven Ray recruited 23 psychologists from approximately twenty states to participate. Each psychologist was asked to test at least five prelingually deaf (70db loss) children using "An Adaptation of the 'Wechsler Intelligence Scales for Children-Revised' for the Deaf" developed by Ray. The adaptations consisted of alternate instructions and supplemental practice items designed to facilitate a hearing impaired individual's comprehension of each task. As reported in *Diagnostique,* approximately 130 protocols were then analyzed to determine if the subtest scores as well as the overall performance IQ differed significantly from the scores obtained by hearing children on the Wechsler standardization.

When the results were collected, some interesting patterns were discovered. First, the deaf children's scores did not differ significantly from that of the Wechsler norms for hearing children. Thus, it seems that when factors related to test administration are controlled, deaf children score on the average the same as the normal population. However, a peculiar subtest profile was detected and found to be significant. Deaf children of hearing parents had a noticeable weakness in picture arrangement and coding, which the author suggests might be a result of early symbolic deprivation, not the loss of hearing itself. From this, Ray predicted that deaf children will score differently than the hearing population on intelligence tests although overall IQ scores should be within the normal range.

Ray, S. **Adapting the *WISC-R* for Deaf Children.** *Diagnostique,* Spring 1982, 7(3), pp. 147-157.

[redacted]

The Communication Screen is an instrument for screening speech and language abilities of preschool children, ages 2 years - 10 months to five years - 9 months. The test consists of 3 screening tools, each used with a specific age group: 3-Year Screen, 4-Year Screen, and 5-Year Screen. This instrument can be administered by professionals and paraprofessionals in any area associated with preschool children and will serve as a quick, easy method to determine if the child should be referred to a specialist for an indepth speech and language evaluation. The **Communication Screen** does not determine the existence of delayed speech and/or language skills, delineate a child's strengths and weaknesses, or serve as a guide for remediation; the test simply determines the need for a complete evaluation.

The skill areas assessed on the **Communication Screen** are based on normal speech and language development, developmental norms, and the authors' judgments as to which skills would be most predictive of speech and language abilities. Speech skills are checked by making a judgment as to the degree of intelligibility of the child's speech. Language comprehension skills are screened by the child's ability to: understand action pictures, understand prepositions, understand commands, understand number concepts, and understand question forms. Language expression skills screened are: the length of spontaneous utterance, the ability to name colors, the ability to answer questions, and the ability to define words. Verbal imitation of related sentences and recall of digits are included as screening items because these tasks are felt to tap skills essential to language learning, such as: memory, knowledge of grammatical structures, sequencing and temporal ordering abilities, and auditory processing.

Communication Skill Builders, Inc., 3130 N. Dodge Blvd., P.O. Box 42050, Tucson, AZ 85733. 1981. Complete Set $10.00.

Pennsylvania Resources and Information Center for Special Education (PRISE) is a project funded by the Pennsylvania Department of Education, Bureau of Special Education, through P.L. 94-142, and is administered, managed and supervised by Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

Marianne Price, Project Director
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issues and happenings in the
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Volume no. 15, november 1983

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ROBERT WILBURN–Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN–Chief,
Division of Federal Programs and Special Projects

TEACHING FOR GENERALIZATION

Kathleen A. Liberty, Ph.D.
University of Washington
Seattle, WA

Those of us who teach severely handicapped students have worked very hard to help them acquire those skills which will facilitate their leading more independent and rewarding lives. All along we have been pretty confident that once our students learned these skills, they would be able to use them in environments beyond the classroom — at home, at work, and in the community. However, we are finding that the skills we so painstakingly taught are often not being used in other settings.

Adapting these skills to changing conditions involves the process of "generalization." The change may range from a small, isolated difference to a complete change of the entire setting. For example, each time a student picks up a different pencil, he or she is generalizing and adapting to its specific requirements. Each time students wash their hands at a different location, they are generalizing to changes in the wash basin, water faucets, towel dispenser, mirror and all the other conditions of instruction. We certainly cannot provide specific instruction in how to pick up each different object or how to behave in every different setting. Instead, we try to teach a skill that will generalize to untaught instances, to new settings, or to any of the unpredictable changes and unforseeable circumstances that may arise.

Instruction Must Be Modified for Generalization

Unfortunately, we cannot expect generalization to occur as an automatic product of instruction. Instead, we must *program* for generalization by modifying instruction. While researchers are continuing to identify improved methods of facilitating generalization, there are ten strategies which we can use right now.

Strategy 1: Instruct in behaviors that the student will have the opportunity to use. If the student is taught to perform a skill that is useable only on very specific occasions, it is unlikely that this skill will be maintained or generalized. Since so many skills need to be taught and there is so little time for instruction, it becomes crucial that each skill taught is functional, important, and useful to the learner.

Strategy 2: Choose instructional settings that are similar to those in which generalization is desired. Generalization often fails to occur because the student associates a particular behavior with specific training conditions. If you want a skill to transfer to a wide variety of settings, systematically vary the instructional environment. You can take advantage of the different settings within most schools: hallways, cafeterias, other classrooms, auditoriums, playgrounds, parking lots, offices, janitorial supply rooms, and gyms. This strategy is particularly effective when teaching such skills as communication and locomotion, which are not setting specific.

However, for a second type of behavior, a specific class of settings may be essential; for example, toileting skills are performed in the setting class of "lavatories." In these cases, you can program for generalization by providing instruction in different settings of the same class.

For a third type of behavior, such as crossing streets, using public transportation, and attending movies, the settings in which generalization is desired may not be within the school environment. When this occurs, there are three possible choices: (a) teach in the regular classroom; (b) simulate, in the classroom, the conditions of the setting where generalization is desired; or (c) teach directly in non-school environments. Some educators are recommending alternative "c." However, researchers have not yet identified the behaviors for which non-school instruction may be more efficient. You may wish to try "a" or "b" and test to see if generalization occurs outside of the school environment. If it does not, instruction may have to move out of the school.

Strategy 3: Include events from each class of the events to which generalization is desired. Generalization may also fail to occur if the response is associated only with a limited number or range of events. For example, if a student is taught to pick up certain objects but does not generalize to untrained objects, it may be that the objects used in training do not sufficiently sample the range of objects available. One should expand the objects and other examples or instances used in training to include at least one example of each class to which generalization is desirable.

Strategy 4: Vary events which are irrelevant to the response. Generalization problems may also be the result of irrelevant events becoming associated with the response, such as the words used to direct a behavior, the color of an object or the facial appearance of the teacher. When such events are missing, or appear in different forms, generalization does not occur. For example, if a student is taught to sign "Hi" by the teacher, but fails to sign "Hi" to other people, it may be that the response is associated only with the teacher. This can be minimized by allowing many different people to participate in the instruction of "Hi". If irrelevant events are varied throughout instruction, it is less likely that they will cause generalization problems.

Strategy 5: Gradually eliminate all assistance in responding during instruction. Models, demonstrations, physical prompts, manual guidance, cues and other teaching events are used effectively during instruction to assist the student's response. Generalization problems may occur if the student expects to receive this assistance in other settings. There are two ways to eliminate this. First, time-delay procedures will gradually increase the length of time for responding while delaying the assistance. The assistance is then provided only for errors; as errors decrease, assistance is automatically eliminated. Secondly, the topography of the assistance may be reduced by gradually changing the intensity of the assistance. For example, verbal cues may be eliminated by speaking with less and less volume and fewer and fewer words. Instruction should be continued until all assistance is removed. If this is not possible, the student should be taught how to access help in other settings.

Strategy 6: Program naturally occurring reinforcers. If a response is not controlled by naturally occurring reinforcers, the response itself as well as generalized responding will fail to occur or disappear over time. Naturally available reinforcers may be determined by surveying other settings. However, they are often inherent in the task or consist of attention and approval by other people, or money.

Teaching functional behaviors will usually mean that you are providing instruction in a skill that will allow the student to access natural reinforcers. If non-natural reinforcers, such as raisins for signing, are used, they should be presented with the natural reinforcers and gradually eliminated. This can be done by introducing a time-delay between the presentation of the natural reinforcer and the presentation of the synthetic reinforcer, until the natural reinforcer controls responding.

Strategy 7: Thin reinforcement schedules to approximate those in natural settings. If instruction is concluded while the student is still receiving the one-to-one reinforcement used for many acquisition programs, the response will rapidly disappear. Survey the settings in which generalization is desired to determine how often reinforcement is likely to occur. Reinforcement in natural settings is usually available only after a long interval of responding or after many responses have been performed. Extend instruction until the response is controlled by natural schedules of reinforcement to facilitate maintenance and generalization. If this is not possible, you may have to increase the amount of reinforcement in other settings by either training people in those settings to deliver it or by teaching self-reinforcement to the student.

Strategy 8: Build skill fluency. Many times instruction ceases when the student is simply accurate or able to perform the skill. Unless the student can also perform the skill fluently, it is unlikely that the skill will be maintained or will generalize. Problems may occur if the student is able to substitute the acquired but disfluent behavior with a more fluent but less desirable behavior. For example, if the student can move from place to place more quickly by crawling than by walking, walking will not maintain or generalize. Instruction should continue until the walking skill is fluent.

Strategy 9: Eliminate reinforcement for competing behaviors. If a competing behavior is reinforced, a desired skill is unlikely to be maintained or generalized. This problem may be minimized by providing training to individuals who interact with the student in other settings, or by making sure that the correct response is more fluent than the undesirable one. For example, if the student is able to satisfy hunger more quickly by screaming until someone feeds him or her than by self-feeding, then self-feeding will not generalize. Increasing fluency in self-feeding will allow the student to access food more quickly and efficiently than can be done by screaming. Thus if screaming never produces food, self-feeding should generalize.

Strategy 10: Continue instruction until generalization occurs. During instruction, provide the student with opportunities to generalize, and continuously collect information on his or her progress. Just as teaching strategies are modified to meet individual needs during skill acquisition, different procedures may be needed to produce generalization. Keep trying. Once generalization occurs, keep checking to make sure that it is maintained; if not, reinstate instruction. Be certain that other teachers have clear records of the procedures, so that checking can continue when the student leaves your classroom. You may have to check as little as once or twice per month. It will involve extra effort, especially if you must go to non-school settings. On the other hand, if one does not ensure that the student's skills are maintained and generalized, instruction itself has no lasting value.

Ensuring generalization is a critical challenge to educators. Without it, we must expect to provide continuous, repetitive instruction and the teaching of identical skills in every setting and for every condition. We just do not have the resources to do this. Generalization will only be accomplished if we take the time and make the effort to integrate effective strategies into ongoing instruction.

(The activity which is the subject of this report was supported in part by the U.S. Department of Education (Contract No. 300-82-0364). However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Department of Education, and no official endorsement by the Department should be inferred.)

INSTRUCTIONAL MATERIAL

The **Program for the Acquisition of Language with the Severely Impaired (PALS)** is a developmental communication program that uses behavioral techniques to develop functional communication skills in the severely and profoundly handicapped. **PALS** is intended for use by teachers of the severely handicapped, psychologists, or communication disorder specialists in the home, classroom, clinic, or unit. **PALS** provides assessment tools, training strategies, and training activities which target essential presymbolic skills (which foster communication) and early symbolic skills (which broaden language functions) in language-delayed clients of all ages. Three assessment tools—The Caregiver Interview and Environmental Observation, the Diagnostic Interactional Survey, and the Developmental Assessment Tool—provide an evaluation of the client's communication environment and abilities.

PALS uses three training modes: incidental teaching, a client-directed activity in which the clinician adapts the training procedures to the client's content; stimulation, with general and specific procedures to introduce new material and review previously learned communication skills; and formal training, using a task analysis approach and structured intervention methodology. The **PALS** Manual presents a program overview, describes the use of the assessment tools, and explains the procedures for constructing an individual program. A Training Level Activity Guide provides developmentally sequenced training activities in each training mode, along with possible content suggestions. Levels of presymbolic training include auditory recognition, attention, turn-taking, motor imitation, functional use of objects, communicative gestures, receptive language, and sound imitation. Symbolic training targets include lexical increase, greater utterance length, and increased breadth of semantic and elocutionary functions.

Robert E. Owens, Jr.; Charles E. Merrill Publishing Company, Columbus, OH 43216; $55.00.

PRISE CENTER SERVES YOU

PRISE Moves to Larger Quarters

December 1st is moving day for RRC/PRISE, when boxes will be filled with countless books, journals and instructional materials and transported to the nearby Belmont School, 200 Anderson Road, King of Prussia.

"The walls were closing in and the rent was going through the roof," comments Director Marianne Price regarding the Center's home for the past seven years. "We will have more space for materials and staff *plus* additional areas for client use."

Assistant Director Phil Juska notes, "Our new location in the Valley Forge area gives us continued easy access from the Turnpike, Expressway and Routes 202, 23 and 363. We'll have an entire classroom set aside for our computer lab so we can accommodate more clients in our workshops."

Phil Juska and Marianne Price pause on a tour of the Belmont School during renovations.

In addition the new space includes large and small conference rooms and expanded working space for clients in the library and instructional materials areas. The portion of the Belmont School which will house the Center has also been modified to accommodate the handicapped.

The additional space in the renovated quarters will facilitate the development of several new projects, one of which is the establishment of a collection of Curriculum Guides for Special Education. Guides will be collected from Pennsylvania special educators, and those which fit into the Planned Course Format will be identified. Clients will be hearing more about this from Information Specialist Shirley Pinto through "SpecialNet."

"Besides giving us more space, this move will hold down our rental costs over the next few years," says Price, "leaving a greater percentage of our funding for service to clients."

PRISE Staff Members

(The following profiles will introduce you to several of the PRISE staff members who serve you at the Center. Additional staff members will be featured in subsequent issues of the PRISE Reporter.)

PRISE Team Headed by Price and Juska

Dr. Marianne Price has served as Director of PRISE and the Regional Resources Center for Eastern Pennsylvania (which are housed together) since December of 1982. Prior to that, she was an administrator in the Montgomery County Intermediate Unit in the area of Special Education. She has a Doctor of Education degree from Temple University in the Department of Special Education, an M.E. from Temple, and a Bachelor's degree from Millersville State College.

The Assistant Director of RRC/PRISE is **Phil Juska** who has been with the Center for four years. His educational background includes an M.E. from Temple University and a Bachelor's from St. Joseph University. Juska came to PRISE from an administrative position with a federal project at the Montgomery County Intermediate Unit. It was through his leadership that the Center's computer laboratory and workshops were developed. Juska is also a talented graphic designer, and many of the Center's publications bear his stamp.

Information Specialists Respond to Requests

Among the PRISE staff members, those who serve you most directly are the Center's six Information Specialists. Their requests are received from those of you who are special educators, support personnel whose students have IEP's, and regular educators involved in mainstreaming.

Shirley Pinto graduated from Temple University with a B.S. degree in Medical Technology and has served as a PRISE Information Specialist since the inception of the Center. "When I was hired as a literature searcher in the early days of PRISE, my children were in elementary school. Today they are completing their college educations!" says Pinto.

"I've watched the services offered by PRISE and the specialized collections grow and change steadily over the years. Our services have become more effective and sophisticated as we changed from manual to online computer searching," Pinto comments.

"Working at PRISE has been an ongoing learning experience for me," says Pinto, "and I've often called upon my background in medical research to give me a better understanding of the exceptional child and the questions that face special educators today."

(con't. on reverse side)

Shirley Pinto reads computer print-out.

Regina Abernethy works on a literature search.

Regina Abernethy is a relative newcomer to the PRISE staff. She began working at the Center in an internship program as part of her student teaching experiences from LaSalle College. After graduating with a B.A. degree in Special Education, she joined the PRISE staff as an Information Specialist in September of 1982. Her primary responsibilities include researching the literature in response to information requests, updating and managing the test collection, and informing Special Educators of PRISE services through presentations and inservices.

"Working at PRISE has given me the opportunity to meet many dedicated Special Educators throughout Pennsylvania, which is one of the most interesting aspects of my job," says Abernethy.

DISSEMINATION HAPPENINGS

Current Research Projects

Four Research Institutes were recently funded to develop educational strategies for severely handicapped individuals. The Institutes, which are operating under five-year contracts from Special Education Programs, U.S. Department of Education, began operation October 1, 1982. Two of the Research Institutes were funded to study the problem of skill **generalization**; the other two will focus on **integration** of severely handicapped individuals in schools, communities, and living arrangements.

Generalization

Extending Competent Performance: An Institute for the Study of Generalization with Severely Handicapped Students. Tom Bellamy, Rob Horner, Principal Investigators. Center on Human Development, University of Oregon, 901 East 18th Avenue, Eugene, OR 97403.

Institute for Education of Severely Handicapped Children: University of Washington Research Organization. Norris Haring, Principal Investigator. 205A Parrington Hall DC-05, University of Washington, Seattle, WA 98195.

Integration

California Research Institute on Transition of Severely Handicapped Students to Least Restrictive Environments. Wayne Sailor, Principal Investigator. Department of Special Education, San Francisco State University, 1600 Holloway Avenue, San Francisco, CA 94312.

University of Minnesota: Consortium Institute for Education of Severely Handicapped Children. Luanna Voeltz, Principal Investigator. Special Education Programs, Department of Educational Psychology, University of Minnesota, Minneapolis, MN 55455.

National Diffusion Network

The following program is available for adoption or adaptation through the National Diffusion Network (NDN). For further information on this or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (RISE), 725 Caley Road, King of Prussia, PA 19406. Telephone, 215/265-6056.

Interactive Curricular Experience

This project stresses a process approach to developing individualized programs for the handicapped student using home, school, and community resources. It is particularly effective for the trainable mentally handicapped, ages 3-21. Teachers specially trained in curriculum, behavior management, family involvement, and community interaction train families in instructional and behavior management techniques. They also assist parents in understanding what their children can be expected to achieve, maintaining liaison between school and home, and coordinating home and school instruction.

Individual objectives are set for the students which focus on the acquisition of those skills necessary for functioning in the community. Parents and community members take part in determining these goals and in adapting existing curricular materials to assist students in reaching them.

TEST

The **Trainee Performance Sample (TPS)** is a vocational skills assessment instrument designed to determine the level and type of resources required for teaching bench-type sorting and assembly skills to severely mentally retarded adults and adolescents. Developed at the University of Oregon and revised in 1979, the TPS was standardized on 149 adults classified as severely or low moderately retarded. Because the TPS involves a variety of small parts assembly and manipulation tasks which are directly related to various types of work traditionally performed in sheltered work environments, the results can also be used to determine appropriate job placement. Administration, which takes approximately 20 to 30 minutes, involves three types of instruction: verbal directions, model/match to sample, and physical guidance or prompts.

The 25 test items incorporate three task attributes (difficult discriminations, coordinated two-hand movements, and sequencing of steps) and involve a variety of skills and materials. These include: sorting objects (wires, blocks, containers) by color or size; assembling objects (nuts and bolts, bottles and caps, boxes and lids); following verbal instructions with and without objects; and manipulating single objects in various ways (bending wires, inserting pegs). The TPS package includes a technical manual, administration manual, all materials needed for each test item (including extras), and 100 scoring and interpretation forms, contained in a single briefcase.

Ideal Development Labs, 2911 S. 160 Street, New Berlin, WI 53151. 1982. $495.00.

(This review appeared in slightly different form in "Teaching Exceptional Children," Summer 1983, 15 (4), p. 237.)

The Project RUN Early Education Assessment/Curriculum for the Severely/Profoundly Multiply Handicapped was designed to assist in planning and implementing an educational treatment program for children in the developmental age range of 0 to 48 months. Project RUN covers the curriculum areas of auditory discrimination, communication, gross motor, and visual/fine motor programming. The format of the Assessment/Curriculum includes developmentally sequenced long term objectives (annual goals), sequential short term objectives (test items and implementation objectives), and a formative and summative data collection system. The same set of behavioral objectives is used for assessment, IEP development, and program implementation; a coding system is used to facilitate integration of the planning and implementation process. Possible student modes of response include naming, verbal yes/no, gestural yes/no, touching, and/or directional eye movement. Step-by-step explanations of the procedures and techniques are provided, along with sample forms, a beginning words list, and a list of materials necessary for assessment and implementation. A functional word list to be used in conjunction with specific objectives in the communication area is also provided.

J. A. Preston Corporation, 60 Page Road, Clifton, NJ 07012. 1982. $41.11.

CURRENT CITATIONS

Baer, D. M. **How to Plan for Generalization.** H & H Enterprises, Box 1070, Lawrence, KS 66044. 1981. 36 p. $3.50. This book provides guidelines for developing behavior modification programs that facilitate the generalization of new behaviors to related forms or to settings outside the training environment. Ten steps to be taken in planning for generalization are discussed and illustrated through the use of numerous examples. **How to Plan for Generalization** is intended for use by practitioners who are familiar with and skilled in the use of behavior management techniques and principles.

Burkhart, L. J. **More Homemade Battery Devices for Severely Handicapped Children with Suggested Activities.** R.D. Box 124, Millville, PA 17846. 1982. 161 p. $12.95. This book describes a variety of adapted switches that can easily be made at home by persons working with severely handicapped children. Also included are instructions for constructing toy adapters for use in operating a variety of battery toys, lights, and tape players, and beginning augmentative communicative devices. A description of each device is provided, along with a list of necessary materials, step-by-step instructions for construction, information on possible variations, and instruction on use of the device. Considerations and cautions for using the devices are discussed, and activities for developing cognitive, communication, motor, social, and self-help skills are suggested. Sources of supplies, safety considerations, and instructions for soldering are also provided.

Guess, D. & Noonan, M. J. **Curricula and Instructional Procedures for Severely Handicapped Students.** *Focus on Exceptional Children,* 1982, 14 (5), pp. 1-12. The authors review and analyze major curricula and instructional procedures for severely handicapped students that have evolved from various theoretical positions, and suggest some redirections. Traditional developmental approaches to curricula for the severely retarded are designed to replicate the normal sequence of development among handicapped students and are based on the following assumptions: that normal development represents the most logical ordering of behaviors in a curriculum; that many behaviors within normal development are prerequisite; and that behaviors acquired at a particular age by a normal child are appropriate objectives for a severely handicapped student at the same level of development. Yet there is a lack of empirical data demonstrating that severely handicapped individuals follow a normal developmental sequence, and many developmental curriculum approaches include tasks that are neither age-appropriate nor relevant to environmental realities.

The behavioral/remedial approach, involving extensive task analyses of skills to be taught to handicapped individuals, has resulted in a sophisticated how-to-teach technology, but one which has not always been practical to implement in schools. In part because of instruction in nonfunctional skills or splinter skills in relatively isolated times and settings, there has been a lack of generalization of trained skills to other persons, settings or materials.

In response, the community adaptation approach has adopted a more ecological orientation to the identification of functional, chronological-age-related skills important for successful community living. However, this approach separates curriculum development from instructional methodology. The authors suggest that future curriculum development efforts for severely handicapped students must teach skills that have the widest and most functional applicability across a variety of tasks and content areas.

Wuerch, B. B. & Voeltz, L. M. **Longitudinal Leisure Skills for Severely Handicapped Learners: The Ho'onanea Curriculum Component.** Paul H. Brookes, P.O. Box 10624, Baltimore, MD 21204. 1982. 236 p. $15.95. Developed under a federal grant to the University of Hawaii, the Ho'onanea Curriculum was designed to meet leisure education needs of severely handicapped individuals in a variety of environments. The curriculum was field tested and validated with more than 50 severely handicapped students, ages 12 to 20, in public and private special education centers and integrated public schools. The activities are primarily indoor, are not oriented toward physical activity, and are for use by the severely handicapped person individually or with one other person. Activities include portable bowling, Lego, Lite-Brite, marble rollway, electronic music stick, pinball games, remote control vehicle, Computer Simon, target games, and television video games.

Task-analyzed skill sequences are provided, with special branches, procedures, and modifications for individualized problems. No prerequisite skills are required before beginning training in the entry level phase of each instructional sequence.

VIDEOTAPE

The Other Children is a videotaped panel discussion presented by four siblings of developmentally disabled children at the Manhattan Mental Retardation/Developmental Disabilities Council. Some of the issues which the panel members discuss are: their concerns about the future, the need for counseling for siblings of handicapped children, and how a handicapped sibling can affect the life choices of a nonhandicapped brother or sister. The discussion makes the viewer aware of the intense pressures placed upon other siblings by a handicapped child, as well as the rewards.

3/4" video cassette/color/30 minutes/1981/$195.00

Produced and distributed by the Special Citizens Futures Unlimited, Inc., 823 United Nations Plaza, New York, NY 10017.

RESEARCH BRIEF

Study Compares Single and Multiple Training Examples

If schooling is to have any impact on improving the quality of life for severely handicapped students, they must be taught skills that have general case responses. A general case response is one that is performed across an array of natural situations where it is appropriate, and is not performed where it is inappropriate. Defining how to teach general case responses is one of the most significant challenges facing educators of severely handicapped children.

This study compares the effects of using a single training example versus multiple training examples on the acquisition of a general case vocational skill and on frequency of errors. The specific skill addressed by this research is the crimping and cutting of wire leads attached to biaxle electronic capacitors, a task commonly performed by handicapped workers in electronic circuit board assembly. The fact that workers may be required to handle literally hundreds of different types of capacitors underscores the need to teach this skill as a general case response.

Single Instance

The subjects were four adolescents who attended a public school classroom for students with documented IQ's below 50 on the Stanford Binet. The study employed a multiple baseline mirror design. Following baseline, each student received **single instance training,** i.e., the student was taught to crimp/cut a single capacitor. The capacitor selected for training was the one most readily available to workshops performing the task. Training materials included 30 single instance capacitors and the crimp/cut tool. Training sessions lasted 20 to 35 minutes and involved crimp/cutting 30 capacitors. The students were prompted to perform the necessary manipulations, praised for correct performance, and corrected when errors occurred. After meeting the training criterion (90% correct over 2 consecutive days), data was collected on 20 nontrained probe capacitors. Measurement of probe performance was indexed in terms of the total number of nontrained probe items performed correctly and the patterns with which errors occurred. To be scored correct, a capacitor needed to meet industry standards. Errors were classified according to three error types.

General Case

The **general case** phase exactly replicated the single instance phase except students received training on three new capacitors that were carefully selected to sample the full range of stimulus variations across several hundred types of capacitors. During a training session, the student was presented with a box of 30 capacitors, 10 of each type. After meeting the training criterion, data was collected on 20 nontrained probe capacitors.

Results of Training Noted

During baseline, none of the students completed a capacitor correctly. Following instruction on the single instance capacitor, all students displayed slight improvement on the 20 nontrained probe capacitors. The pattern of performance across all four students indicated stable responses, with 2 to 5 of the 20 probe capacitors completed correctly. The data from the general case phase indicated a major improvement across all subjects, with three subjects consistently demonstrating 85% correct performance on each probe and the fourth student demonstrating 95% correct performance. Furthermore the data indicated that single instance training was functionally related to an increase in all error classes. However, during the general case phase, the level and stability of these errors dropped dramatically.

The authors conclude that the strategy of teaching severely handicapped students one good example of a skill is ineffective for teaching the general case. The student trained with a single example is unlikely to develop a generalized skill that will facilitate competent performance across stimulus variations. Successful acquisition of a general case skill can occur if multiple training examples are selected which sample the range of stimulus variation to be encountered.

Horner, R. H. & McDonald, R. S. **Comparison of Single Instance and General Case Instruction in Teaching a Generalized Vocational Skill.** *The Journal of the Association for the Severely Handicapped,* 1982, 7 (3), pp. 7-20.

Pennsylvania Resources and Information Center for Special Education (PRISE) is a project funded by the Pennsylvania Department of Education, Bureau of Special Education, through P.L. 94-142, and is administered, managed and supervised by Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

Marianne Price, Project Director
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PRISE reporter
issues and happenings in the
education of the learning disabled
no. 15, January 1984

pennsylvania resources and information center for special education 200 Anderson Road, King of Prussia, Pa 19406. 215/265-7321

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RESEARCH INSTITUTES IN LEARNING DISABILITIES

Bernice Y. L. Wong, Ed.D.
Faculty of Education
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The year 1977 was an important one in the history of learning disabilities, for in that year five research institutes in learning disabilities were created through funding from the Bureau of Education for the Handicapped. The purpose of their establishment was to address pressing questions in the learning disabilities field and to provide a necessary base of empirical information. Because the LD field, like any other, has its share of poor research and consequently problems in interpretation and generalization, the establishment of the institutes renewed hope for finally getting a handle on some of the important issues in learning disabilities. This hope was heightened by the different focus taken by each research institute.

Since it is impossible in such a brief report to do justice to the range, diversity and richness of the research emanating from the institutes, I have chosen to concentrate on the salient findings. In so doing, I shall analyze the impact of these findings on the learning disabilities field and venture to raise some questions for possible future research.

(Editor's Note: *Due to limitations of space, the following article contains Dr. Wong's report on only two of the institutes, those located at the University of Illinois/Chicago and the University of Kansas. For information regarding the additional centers—located at the University of Minnesota, University of Virginia and Columbia University—please see the* **DISSEMINATION HAPPENINGS** *section and the insert request form in this newsletter.)*

THE CHICAGO INSTITUTE

Under the directorship of Dr. Tanis Bryan, the Chicago Institute focused on **the social problems of the learning disabled.** Together with her research associates, Susanna Pflaum, Ruth Pearl, Mavis Donahue and Jim Bryan, Tanis Bryan researched the possible causes of LD students' social unpopularity. In their programmatic research, some very imaginative and interesting studies were done in the following areas: social perception and role-taking, communication skills, attributions, taking initiative, and goal structure and nonverbal aspects of social problems.

Salient Research Findings. Among the many interesting findings from the research, the more important ones deal with the LD children's language problems and their difficulties in interpersonal communications. For example, when the LD children in the studies acted in the role of listeners, they tended not to seek clarification through questions if a given message was deliberately ambiguous. When acting as speakers to younger children, they failed to modulate the complexity of their language. One intriguing finding was J. Bryan's discovery that LD children were rejected more by adults who were strangers to them than by those they knew. Peer students rated LD children more negatively than non-LD children in a video-tape with the sound cut off.

Regarding attributional patterns, LD children tended to blame themselves for task failure, attributing failure to lack of ability. Interestingly, they would not accept responsibility for their task success, attributing it instead to luck. Non-LD children would attribute task failure to lack of effort, and in face of it would show adaptive behavior of task persistence or deploy a different problem-solving strategy. LD children, in initiating and maintaining a conversation with a person in the role of a TV talk host, talked as much as the non-LD. However, the LD children tended to ask fewer questions overall and, specifically, fewer questions that elicited narratives or extended discussions from their partners.

In interpersonal problem solving, LD children exhibited less skill in persuasion than non-LD children. They tended to agree more than disagree, and they were less likely to argue with others. Non-LD students, when acting in the role of advisors about interpersonal problems, offered more feedback and approval and tended to follow politeness conventions to end their conversations. LD advisors were found to be very ineffectual—they offered advice in a question format rather than in a declarative statement, thereby indicating lack of confidence and undermining their own persuasiveness.

The research from the Chicago Institute appears a little short on intervention studies. This lack is defensible, however, in that one must first ascertain the areas in which LD students require social skills training. For example, if one assumes that LD children's deficits in social skills stem from a lack of prosocial knowledge, one would then plunge headlong into increasing their repertoire of prosocial knowledge. Since this assumption has been shown to be unfounded by J. Bryan's research, such a prosocial skills intervention would be a waste of money and effort.

There have been a few intervention studies in changing LD

This issue of the **PRISE Reporter** features the work which has been done over the past six years in the area of Learning Disabilities by five research institutes established by the federal government. This research has made a significant contribution to the field of Learning Disabilities and offers new insights to professional practitioners in the field.

children's attributions, but unfortunately they were to no avail. However, Thomas and Pashley did find increased task persistence despite lack of attributional improvement/change.

Impact. The impact of the research from the Chicago Institute lies first and foremost in gaining recognition for the important reality of the social problems of the learning disabled. These problems affect LD individuals in diverse ways: in their interpersonal communications and relationships; in their internal belief systems and attributional patterns; and in restricting their functioning vis-a-vis initiative taking, problem-solving and learning. Secondly, and to a lesser degree, the research indicates that there are both structural problems (i.e., linguistic deficiencies) and metacognitive problems (i.e., insufficient awareness and strategic deficits in communication contexts) in the social communication problems of LD children.

Potential future research. One area which might complement the research conducted at the Chicago Institute appears to be the search for and investigation of LD children who may not be popular but are accepted by non-LD peers. For instance, perhaps LD children who are athletic/well-coordinated in sports would be accepted by peers for participation on sports teams. Investigation into such LD children's social skills as contrasted with those of rejected LD children would complement the knowledge gained from this very solid and systematically gathered research.

Despite the apparent disappointments in interventions, attempts at interventions should perhaps persist. However, intervention strategies may need to be formulated differently. For example, prior to intervention research studies, one might analyze possible precursor/component skills needed for the very social skill that one desires to inculcate in the LD children. Thus task persistence may figure as a necessary precursor to developing more internal locus-of-control and appropriate attributions.

THE KANSAS INSTITUTE

The Kansas Institute addressed the problems in **identification and instruction of LD adolescents and young adults,** and it is the only institute which focused on this age group. Because there is a growing awareness and sensitivity to the educational and occupational problems of LD adolescents and adults, the timely focus of the Kansas Institute strikes a responsive note among the general public and LD professionals.

Although the Institute has done considerable work on epidemiological research of LD adolescents, the staff's salient research appears to be on cognitive/learning strategies. This approach, conceptualized by Dr. Gordon Alley and Dr. Donald Deshler, stems from their recognition that LD adolescents need to "learn to learn." Specifically, they see that LD adolescents need to be taught skills to increase their learning efficiency.

Learning Strategies Approach. This approach was designed to meet the following three lifetime learning needs: (1) a knowledge of the physical and social world; (2) a knowledge of recurring demands (job skills, social conventions, and role tasks) and the preparation to meet these demands; and (3) an ability to learn independently and to adjust to changing conditions. Thus LD students are taught rules, principles and techniques to help them learn, integrate, remember and recall information more efficiently. Consequently they are better able to meet the demands and expectations of the secondary school.

The important aspects of this learning strategies approach concern: (a) the basic goal of teaching LD students *how* to learn efficiently; (b) a strong emphasis on transfer and generalization of strategies from the resource room to the classroom content; and (c) instruction which is closely tied to regular course work, thus teaching the LD student more effective methods of learning content information by using his or her class assignments for instruction.

LD students are taught various critical learning strategies within many skill areas. Examples of some of these skill areas are: error monitoring, notetaking, questioning, and remembering. Instruction in critical skill areas obviously involves long-term goals. To facilitate LD adolescents in attaining these goals, more short-term instructional goals are necessary. Examples include test-taking skills, textbook usage, time management, etc.

Alley and Deshler have done a prodigious amount of work on their learning strategies approach in instructing the LD adolescent. Equally laudable is their ceaseless effort to disseminate information on this instructional approach through workshops. Readers may be astounded to know that in British Columbia, Canada, Alley and Deshler's learning strategies are widely embraced *and* applied by secondary learning assistance teachers. This writer on occasion wonders if she should modulate the high enthusiasm among those teachers, just to insure a more objective evaluation of the effectiveness of the learning strategies approach.

Impact. First of all, the impact of the Kansas Institute lies unequivocably in its highlighting the *nature* of the LD adolescents' inability to learn. The research underscores the fact that LD adolescents not only have many academic deficiencies, but more importantly, that they have *not learned how to learn* (an attribute that cognitive psychologists such as Ann Brown and John Bransford repeatedly emphasize as central to successful learning).

Secondly, the learning strategies approach developed by Alley and Deshler has had a profound effect on LD teachers in the secondary schools. Practitioners had been groping in search of profitable ways of teaching LD adolescents, frustrated by their poor motivation, and of suitable materials to use. The learning strategies approach provides one viable solution to those problems, and hence fills an important need. It also removes needless confusion and agonizing over the question of structural problems in LD adolescents. Because cumulative academic deficits confound whatever structural problems there may be, it is far more constructive to focus on alleviating academic deficits through an innovative instructional approach.

Future Directions. It seems appropriate that, building on the work of Alley and Deshler, future research be directed toward gathering data on such questions as, "Which learning strategies work best with what kinds of LD adolescents under what conditions?" Specificity of information in this area will enhance the usefulness of the various learning strategies. Last but not least, a body of empirically substantiated effective remedial strategies for LD adolescents would enrich the LD field immensely.

RESEARCH BRIEF

Study Addresses Pre-Referral Intervention System

A pre-referral intervention system was implemented in three schools (2 elementary, 1 junior high) in which consultation, observation, and intervention occurred before a student entered the typical referral-for-assessment phase. A survey assessing teachers' beliefs about special services and teachers' expectations and preferences about the referral-to-placement process was completed in the fall and spring of the school year to assess the extent to which changes took place as a result of the pre-referral system. Additionally, the effect on referral, testing, and placement rates was monitored. Results indicating changes in attitudes concurrent with changes in referral-to-placement rates are reported, and school system factors affecting a pre-referral system are discussed.

Graden, J. L., Casey, A. & Bonstrom, O. **Pre-Referral Interventions: Effects on Referral Rates and Teacher Attitudes.** (Research Report No. 140). September 1983. Institute for Research on Learning Disabilities, University of Minnesota, Minneapolis, MN 55455.

CURRENT CITATIONS

Gadow, Kenneth D. & Bialer, Irv., eds. **Advances in Learning and Behavioral Disabilities,** Volume I. JAI Press Inc., 36 Sherwood Place, P. O. Box 1678, Greenwich, CT 06836. 1982. 457 p. $42.50. This initial volume presents research studies as well as reviews of literature on a wide range of topics in the areas of learning disabilities and behavior disorders. Both areas of disability are broadly defined, so as not to exclude individuals who meet the more conventional criteria of mental retardation, emotional disturbance, and physical disability. Part I of Volume I focuses primarily on academic skills and cognitive processes in children with learning disabilities. (The definition of the term "learning disability" as used in this section conforms to the definition that appears in P.L. 94-142). The topics covered include research on reading disorders, an evaluation of the relevance of social learning theory to the study of learning disability, and the results of a series of studies on short-term memory. Part II is devoted to problems in conduct and social adjustment in exceptional children. Topics covered include the use of psychotropic drug therapy for behavior disorders in mentally retarded individuals, studies on the reduction of self-injurious and aggressive behavior in mentally retarded children and adolescents, and studies of hyperactive children related to substance abuse, socialization and peer relations, and diagnostic issues.

Hallahan, D. P., Lloyd, J. W., & Stoller, L. **Improving Attention with Self-Monitoring: A Manual for Teachers.** University of Virginia Learning Disabilities Research Institute, Charlottesville, VA 22903. 1982. 28 p. $1.75. This manual provides directions for teachers to use in establishing a self-monitoring procedure for improving the attention to task of children in classroom settings, particularly those students identified as learning disabled. The procedures are based on research conducted at the University of Virginia Learning Disabilities Research Institute, which indicates that self-monitoring of on-task and off-task behavior, using randomly presented tones on a tape recorder as cues, results in increased on-task behavior and, to a lesser degree, increased academic productivity. Detailed descriptions of materials and procedures are provided, including a self-questioning strategy for the student to use when self-monitoring, a method for the student to use to record his or her answers to the self-assessment questions, and a process for weaning the student from reliance on external self-monitoring cues. The authors also provide techniques for assessing whether the self-recording procedure is having the desired effects, answers to commonly asked questions about implementation of self-monitoring procedures, and sample forms.

Kneedler, R. D. & Hallahan, D. P. **Research in Learning Disabilities: Summaries of the Institutes.** *Exceptional Education Quarterly,* Spring 1983, 4(1), pp. 1-147. In this issue of *EEQ,* the research findings of each of the five learning disabilities institutes are summarized in separate reports. Also included are two articles, one by Barbara Keogh and one by James McKinney, which provide commentary on the individual and collective contributions of the Institutes to learning disability theory and practice. McKinney's criticism of the Minnesota Institute is countered in a response from that Institute.

Miller, Ted L. & Davis, Earl E., eds. **The Mildly Handicapped Student.** Grune & Stratton, Inc., Post Office Box 733, Old Chelsea Station, New York, NY 10113. 1982. 526 p. $34.50. This book explores the issues related to a noncategorical approach to educating learning disabled, mildly retarded, and mildly behaviorally disordered children. Evidence in favor of the concept as well as contradictory data is presented. A broad range of topics with respect to the noncategorical approach is addressed including traditional categorical characteristics, psychoeducational similarities and differences, the assessment of the mildly handicapped, programmatic considerations, and perspectives on the future of a noncategorical approach.

INSTRUCTIONAL MATERIAL

Science in Action Series Designed for Poor Readers

The **Science in Action Series** is a set of workbooks designed to appeal to older adolescents who are poor readers and have difficulty understanding concepts. Reading difficulty level is approximately second grade. Two books each in the areas of Life, Earth, and Physical Science are available as the first installment of a planned 18-book series. Current titles are: *Sound, Electricity, The Solar System, Weather, Green Plants,* and *The Five Senses.*

The workbooks are divided into units, each of which begins with an introduction that tells students what they will learn and familiarizes them with new vocabulary. A typical unit teaches two or three concepts, and reading and discussion activities are followed by an experiment or some other type of reinforcing activity. At the end of the unit there are questions to test the students' understanding of concepts. Enrichment projects are also suggested.

Janus Book Publishers, 2501 Industrial Pkwy. West, Dept. E., Hayward, CA 94545. Sample set (one copy of each title and Teacher's Manuals) $14.70. Classpak (10 copies of one title and Teacher's Manual) $23.00. Classet (10 copies of each title and Teacher's Manuals) $129.00.

NEW FILM

Catch 'em Being Good contrasts the application of positive discipline with more traditional ways of responding to typical classroom behavioral and performance problems. The techniques of positive discipline presented include the following: praising and ignoring, soft reprimands, daily report cards, response cost programs, modeling, self-instruction, and self-evaluation. Each technique is demonstrated in a regular classroom situation and then discussed by a panel of teachers, psychologists and administrators.

Some of the problems the film addresses are lack of attentiveness, failure to complete homework, and poor academic performance. The procedures presented for coping with these problems can be used with children in regular classrooms, special education classrooms, or mainstreaming situations.

16mm/color/sound/30 minutes/1983/$495.00
video/$495.00

Research Press, Box 317720, Champaign, IL 61820.

Catch 'em Being Good has recently been added to the film collection at the Eastern Pennsylvania Special Education Regional Resources Center (ESERRC).

DISSEMINATION HAPPENINGS

Although the research activities at the five Learning Disabilities Institutes terminated on September 30, 1983, they will all continue to disseminate reports of their research for at least one year. A wealth of material is available, and you may request information by contacting the Institutes as follows:

The University of Minnesota Institute
Contact: Dr. James Ysseldyke, Department of Educational Psychology, Institute for Research on Learning Disabilities, University of Minnesota, 350 Elliott Hall, 75 East River Road, Minneapolis, MN 55455.
Telephone: 612-376-2666.
(Focus of research: Assessment Process for LD).

The Chicago Institute for the Study of Learning Disabilities
Contact: Dr. Tanis Bryan, College of Education, University of Illinois at Chicago, Box 4348, Chicago, IL 60680.
Telephone: 312-996-4948.
(Focus of research: Social Problems of LD).

University of Virginia Learning Disabilities Research Institute
Contact: Dr. Daniel P. Hallahan, University of Virginia, Room 152, Russner Hall, 405 Emmet Street, Charlottesville, VA 22903.
Telephone: 804-924-0756.
(Focus of research: Cognitive Behavior Modification, Metacognitive Theory, and Attack Strategies for Academic Instruction).

The University of Kansas Institute for Research in Learning Disabilities
Contact: Dr. Donald Deshler, University of Kansas, 313 Carruth O'Leary, Lawrence, KS 66045.
Telephone: 913-864-4780.
(Focus of research: Identification and Instruction of LD Adolescents).

Institute for the Study of Learning Disabilities at Teachers College, Columbia University
Contact: Ms. Lee Jackson, Teachers College, Columbia University, Department of Special Education, Box 223, N. Y., NY 10027.
Telephone: 212-678-3859.
(Focus of research: Academic Skill Areas).

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The **Kaufman Assessment Battery for Children (K-ABC)** is an individually administered measure of intelligence and achievement for children ages 2½ through 12½ years. The **K-ABC** Mental Processing Scales assess problem-solving ability involving simultaneous and sequential mental processes; a separate Achievement Scale measures acquired knowledge, including vocabulary, reading and arithmetic skills. The separate scales were normed on the same sample (which included learning disabled, mentally retarded, speech and language impaired, gifted and talented, severely emotionally disturbed, and other handicapped children) thus allowing meaningful ability/achievement comparisons. The **K-ABC** is generally not appropriate for use with visually impaired children, however, because of the many visual stimuli it uses. Supplementary sociocultural norms are provided to promote less biased assessment of minority children.

A special Nonverbal Scale, made up of those subtests that may be administered in pantomime and responded to motorically, is provided to assess the mental processing of hearing impaired, speech and language disordered, and non-English speaking children ages 4 through 12½. All of the scales yield a standard score with a mean of 100 and a standard deviation of 15. Administration time averages about 45 minutes for preschool children and 70 to 75 minutes for school-age youngsters. The **K-ABC** may be administered by psychologists or other professionals qualified to administer individual intelligence tests. The ASSIST (Automated System for Scoring and Interpreting Standardized Tests) microcomputer software is available to compute **K-ABC** derived scores and generate student profiles.

American Guidance Service, Publishers' Building, Circle Pines, MN 55014. 1983. Complete Kit $135.00.

Pennsylvania Resources and Information Center for Special Education (PRISE) is a project funded by the Pennsylvania Department of Education, Bureau of Special Education, through P.L. 94-142, and is administered, managed and supervised by Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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PRISE reporter
issues and happenings in the
education of the emotionally disturbed
no. 15, february 1984

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ROBERT WILBURN–Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN–Chief,
Division of Federal Programs and Special Projects

EMOTIONAL DISTURBANCE OR BEHAVIOR DISORDERS: SEMANTICS OR SUBSTANCE?

Frank M. Gresham, Ph.D.
Louisiana State University
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The identification, placement, and education of emotionally disturbed children and youth represent an area of special education that is a morass of vagueness, ambiguity, and dubiousness. The vocabulary with which we describe or differentiate the various types of emotional disturbance lacks precision. Furthermore, we know little about the causation, prevalence, and long-term outcomes of the different types of emotional handicaps.

Part of the reason for the ambiguity over the label "Emotional Disturbed" (ED) has to do with the label itself. The words imply that what is *disturbed* is one's emotions. However, the overwhelming majority of students classified as ED and placed into special education programs are so placed on the basis of *disturbing behavior* rather than disturbed emotions. That is, students whose behavior is disruptive, aggressive, situationally inappropriate, and has a negative outward focus toward the school environment are prime candidates for the ED label. Many, if not most, "ED" children are those whose behavior has been deemed "unmanageable" by regular classroom teachers. In the days before the passage of Public Law 94-142 (i.e., when many of us were in school) these students were considered as behavior problems, discipline problems, or just plain bad kids.

A more relevant term now being used by some states to describe these children is "Behavior Disorders" (BD). This label reflects more than just a semantic change – it recognizes the fact that the major reason these children are referred and placed is primarily related to their disturbing overt *behaviors* rather than their disturbed emotions.

This seemingly semantic difference might appear to many educators to be a minor point, in that the instructional strategies utilized would remain the same regardless of whether the child is labeled ED or BD. I would suggest to you that the effects of these two labels may be substantial, not only upon the conceptualization of the child's problem, but also the instructional strategies employed.

Assessment: Traditional versus Behavioral

A major reason for labeling a child either as ED or BD relates to the type of assessment conducted on the child for classification and placement purposes. The following discussion will briefly contrast two assessment approaches which lead to labeling a child ED or BD.

Most children referred for ED programs are evaluated within a **traditional assessment** model. By "traditional" I mean that the focus of the assessment is to identify underlying, unobservable "traits" which presumably explain the appearance of pathological or disturbed behavior. Traditional assessment views aberrant behavior as a ***sign*** of a broader or more encompassing emotional disorder (i.e., as emotional disturbance). Traditional assessment procedures thus rely primarily upon projective and objective personality tests to diagnose the presence of ED.

Behavioral assessment views deviant behavior as a *sample* of behavior which may or may not occur across situations or settings. In behavioral assessment, inferences are not made to underlying "traits," but rather descriptions are made of specific behaviors and the situations and settings in which they occur. The methods used in behavioral assessment primarily involve the following: systematic behavioral observations in the classroom; behavioral interviews with teachers, parents, and the child; and behavioral ratings of the child by teachers and parents. This assessment leads to the appropriate BD label.

What is the significance of these two diverse assessment approaches in relation to designing instructional strategies? There are clearly fundamental differences between the traditional and the behavioral assessment regarding the underlying assumptions about disordered behavior. I favor the use of the behavioral assessment because it produces more educationally relevant and practical information, i.e., information that can be utilized to design effective educational interventions for children. Such information includes knowing the frequency, intensity, and/or duration of problem behaviors, the situations and settings in which they occur, and the effects these behaviors have upon school functioning.

The results of projective or objective personality tests, such as those used in the traditional assessment, cannot be so used and hence are educationally irrelevant. Knowing that a child's small human figure drawing reflects a low self concept or that he or she evidences so-called "emotional indicators" is not educationally useful information.

A Definition of Behavior Disorders

The terms "ED" and "BD" (and additional variations) are used and defined in different ways throughout the states and by the federal government. In any case, most of the definitions are vague, subjective, and do not specify or imply the direction of change for given problem behaviors. I prefer the term "Behavior Disorders," and it seems to me that a comprehensive and useful definition of BD should include the following:

(1) specification of behavioral excesses or deficits;
(2) specification of multiple aspects of behavior (frequency, intensity, duration, etc.);
(3) specification of the behavioral system through which

excesses and deficits are expressed (cognitive-verbal, overt-motor, physiological);

(4) demonstration of the occurrence of behavioral excesses and deficits across *settings* (school, home, etc.) and *situations* (classroom, hallway, cafeteria, etc.);
(5) occurrence of excesses and deficits over time;
(6) agreement between multiple methods of assessing excesses and deficits (between observations, ratings, interviews, etc.);
(7) the continuation of excesses and deficits in spite of intervention in the regular classroom.

These seven components of a BD definition can be formally stated as follows:

> "A behavior disorder is said to be present when a child exhibits behavioral excesses or deficits that authoritative adults in the child's environment judge to be too high or too low. These behaviors are considered to be atypical because the frequency, intensity, and/or duration deviates from a relative social norm. The behavioral excesses or deficits which constitute a behavior disorder can be expressed through one or all behavioral systems (cognitive-verbal, overt-motor, physiological) and occur across situations, settings, and time. No single assessment method is used as the primary basis for the diagnosis of a behavior disorder, but rather it is diagnosed on the basis of multifactored assessment information which agrees both between and within assessment methods. In addition to the above considerations, a behavior disorder can only be said to be present when behavioral excesses or deficits continue in spite of an intervention in the regular classroom."

Compare the above definition to most of the currently accepted definitions of ED. These, for the most part, describe vague, underlying, unobservable "traits" which are assumed to be causative factors in the expression of disturbed behavior. As a result of relying on such inadequate definitions, many educators are faced with the task of remediating something which is unobservable (i.e., a mythical trait).

Semantics or Substance?

What difference does the distinction between the ED and BD labels make in the way educators teach these problem children? Recent studies have shown that when a child's problems are presented behaviorally rather than "emotionally," teachers are better able to specifically define behaviors and also have higher expectations that they can design educational strategies to change problem behaviors.

Consider the following two IEP short-term goals:

A. John will develop a better self concept.
B. John will increase the number of positive self statements and will increase the duration of eye contact with others in conversations.

You, as educators, decide which of the above IEP goals would be easier to achieve.

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Ross, A. O. **Psychological Disorders of Children: A Behavioral Approach to Theory, Research and Therapy** (2nd ed.). McGraw-Hill, New York, NY. 1980.

(**Editor's Note:** On December 2, 1983, President Reagan signed the Education of the Handicapped Act Amendments of 1983 into law (P.L. 98-199). The Amendments order: a) a review and evaluation of the term "behaviorally disordered" as it relates to the provision of a free, appropriate public education; and b) how a change in terminology from "seriously emotionally disturbed" will impact on the identification, assessment, types of special education and related services provided if such a shift in terminology is made. The Office of Special Education Programs is required to report the results of the review to Congress in six months.
—Adapted from *NASDSE Liaison Bulletin,* November 25 and December 13, 1983 issues.)

CURRENT CITATIONS

Long, N. J., ed. **Social and Emotional Development.** *The Pointer,* 1983, 27, pp. 1-47. (Entire issue). The articles included in this issue deal with such topics as using sociometrics to understand interpersonal relationships among emotionally disturbed students, understanding and correcting irrational beliefs in students, helping children who do not talk in school, and helping parents understand their adolescents. School-based intervention strategies for school phobia are also discussed, as well as procedures for running problem-solving conferences, using a unit on photography to improve adolescents' social skills, and the therapeutic use of art to increase trust in troubled youth.

Martin, R. P. **Personality Assessment: The Rating Scale Approach.** *School Psychology Review,* 1983, 12(3), pp. 224-371. (Entire issue). This issue is intended to provide practitioners with information about recent developments in the use of the rating scale in personality assessment. A number of devices are described in which adults use a standardized instrument to record incidential observations they have made of a child. Among the topics included in this issue are the following: discussions of the importance of social-emotional assessment in prevention of school problems, with a description of tha Barclay Classroom Assessment System (a multi-trait, multi-method technology for helping identify elementary school students at risk); an analysis of current personality and behavior assessment practices in the schools; an account of the development of the Quay-Peterson Revised Behavior Problem Checklist; a description of the standardized Bristol Social Adjustment Profile, for use in differential classification of disordered behavior in school-age children; a description of the Stress Response Scale, for use in assessment of children's emotional adjustment reactions; a review of recent developments in rating temperament in young children; a delineation of the development of the SBS Inventory of Teacher Social Behavior Standards and Expectations, and the SBS Checklist of Correlates of Child Handicapping Conditions (two scales designed to assess teachers' expectations for social-emotional functioning in their classrooms); a review of the most widely used teacher rating scales and related factor analytic studies; and a discussion of problems and issues in using rating scales to obtain data on child behavior.

Polsgrove, L., ed. **Aversive Control in the Classroom.** *Exceptional Education Quarterly,* 1983, 3(4), pp. 1-79. (Entire issue). The purpose of this issue is to present a summary of practical and research information about methods for reducing and/or eliminating problem behavior in special education settings. The authors provide an overview of litigation concerning the use of aversive techniques to change behavior, a survey of corporal punishment of mildly handicapped students, a critical review of the literature on punishment and behavior reduction strategies, and a discussion of procedures

Current Research Project

In October, 1982, three five-year-long Early Childhood Research Institutes (ECRIs) were funded by Special Education Programs, U. S. Department of Education. The research of one of these Institutes, the University of Pittsburgh ECRI, will address the development and validation of assessment instruments and accompanying instructional strategies for dealing with social and related skills of severely handicapped preschool children. Studies will focus on the following:

- **Social interaction skills**, including the identification of social skill target behaviors associated with peer acceptance in mainstreamed settings, the validation of target behaviors taught through peer-mediated interventions, procedures for ensuring generalization of trained skills, the relationship of child characteristics to success of peer-mediated interventions, and (in later work) the development and validation of a social skills curriculum.
- **Independent work and play skills**, including the identification of skills critical for independent functioning in mainstream preschool and kindergarten environments, selection of target behaviors for intervention, and (in later work) development and validation of intervention strategies for teaching these skills.
- **Parent training**, including investigation of the relative effectiveness of a variety of generalization training procedures, the effects of parent training on a number of child and family variables, and (in later work) the validation of detailed procedures for training parents in the use of behavior modification for their severely handicapped preschool children.
- **Language skills**, including investigation of the effects of modeling by normally developing preschoolers during language training of handicapped preschoolers.
- **Disruptive behavior**, including the development and validation of interventions to reduce or eliminate self-stimulation and self-injury.

University of Pittsburgh Early Childhood Research Institute. Phillip Strain, Principal Investigator. Department of Psychiatry, 3811 O'Hara Street, Pittsburgh, PA 15213. For more information contact Michelle Bourgeois at the Institute, 412/624-2012.

(Adapted from Strain, P. S., Lyon, S. R., & Sainato, D. M. **The Early Childhood Research Institute: An Overview.** *Journal of the Division for Early Childhood,* 1983, 7, pp. 25-31.)

Available from PRISE

The PRISE staff has recently compiled the following computer produced bibliography: **Social Skills Training for Emotionally Disturbed Students.** To receive a copy, please call your Intermediate Unit or School District Liaison (check current listing contained in this newsletter). Or you may contact PRISE directly (Barbara Bateman — 215/265-7321).

PRISE INFORMATION DISSEMINATION SYSTEM

In order to facilitate the provision of PRISE services to our clients, the Center has maintained Liaisons in Intermediate Units and School Districts over the past 5 years. Thanks to the cooperation of both the Liaisons and our clients the system has functioned well. On this fifth anniversary, a thank-you to all who have been involved in this network.

The current PRISE Liaisons for 1983-84 are listed below. If you wish to request information, please contact the Liaison in your Intermediate Unit. (Special education private schools, state schools and hospitals, and other special education facilities should contact PRISE directly 215/265-7321).

Intermediate Unit Liaisons

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PRISE Staff Members

(The following staff profiles are a continuation of the feature which began in the November 1983 issue of the PRISE Reporter.)

Donna Cohen came to PRISE with a liberal arts background and a degree in Speech Therapy from Temple University. Following experiences as a school speech therapist and in private practice, Cohen joined the PRISE staff as an Information Specialist. "I wanted to continue working in the human services profession," says Cohen, "and I found that PRISE offered a wide variety of interests and activities as well as opportunities for professional interaction."

As an Information Specialist, Cohen's primary duties are centered in the area of literature searching, where her background in speech makes her well qualified to handle the speech and language therapy requests. In addition to the search function, Cohen is closely involved in training activities for new liaisons and incoming staff members.

As she prepares a literature search, Donna Cohen checks current journals for pertinent information.

Sunanda Banerjee, or Sue as she is known to everyone, has been working for PRISE as an Information Specialist since July 1977. Her prior work experience includes that of an elementary school teacher. She has a Bachelor's degree in History from Calcutta University (India) and Master's degree in Library and Information Science from Drexel University.

Her major responsibility is acting as librarian for PRISE. This includes acquiring, cataloging and indexing books and documents as well as managing the journal collection. She also responds to information requests from special educators by searching the literature and preparing information packages.

'Working at PRISE has been a continuous challenge for me. The nature of the information requests is constantly changing and so is the focus of the collection and the services."

Barbara Bateman came to PRISE in 1978 as a temporary agency employee in what was to be the first step in a return to the world of work. Two months later she became a permanent member of the staff. As an Information Clerk Bateman handles processing of all incoming and outgoing information requests, works on collection updates and generally keeps the clerical wheels turning. She will probably be the person you speak with when calling PRISE with a direct request for information.

Barbara Bateman (left) and Sue Banerjee work in the PRISE library, updating records for the journal collection.

Cindy Ryan graduated from La Salle College with a B.A. degree in Special Education, and as part of her student teaching experience served as an intern for ten weeks at the Regional Resources Center and PRISE. After working as a Special Education Teacher in Pennsylvania, she returned to PRISE as an Information Specialist.

"I grew up with a physically handicapped brother, and I worked one-to-one with a neurologically impaired little girl throughout my four years in high school," says Ryan. "As a result I decided early on to enter into the field of special education."

Cindy has also served as a volunteer for the Department of Youth Activities of the Archdiocese of Philadelphia, helping to organize and direct weekend retreat programs for children and adolescents.

Cindy Ryan compiles a bibliography by searching computer data bases in the PRISE computer center.

for reducing behavior through reinforcement. Also included are an analysis of applications of response cost procedures in school settings, a discussion of the use of timeout procedures in special education, recommendations for developing guidelines for the use of punishing interventions in schools, and two book reviews.

Schopler, E., & Mesibov, G.B., eds. **Autism in Adolescents and Adults.** Plenum Press, 233 Spring St., New York, NY 10013. 1983. 438 p. $35.00. This volume contains a collection of papers which provide a survey of the needs and problems of autistic adolescents and adults. The first section offers a developmental perspective of adolescence and an overview of current issues in autism and adolescence. The largest section, on individual needs, addresses the areas of language and communication, education, recreation and leisure, vocational training, medical management, sex education, and management of aggressive behavior. A section on family perspectives considers the family needs of the autistic adolescent; stress and coping in families of autistic adolescents; two case studies of autistic individuals presented by family members; and a broad spectrum of legal needs, including estate planning, limited guardianship, and legal rights for social services. The last section of the volume addresses social needs and community programs, with chapters describing three well-established programs for autistic adolescents and adults.

INSTRUCTIONAL MATERIAL

Individualized Assessment and Treatment for Autistic and Developmentally Disabled Children, Vol. III: Teaching Activities for Autistic Children, was developed by staff members from Project TEACCH (Treatment and Education of Autistic and Related Communication Handicapped Children). The book contains 296 sample activities that illustrate teaching activities in 10 function areas at various levels of preadolescent development. Teaching activities within each of the 10 function areas (imitation, perception, gross motor, fine motor, eye-hand integration, cognitive performance, cognitive verbal, self-help, social skills, and behavior management) are arranged in order of difficulty and indexed with a mental age range. Each activity appears in the form in which it was originally written for an individual child, for home teaching and/or classroom teaching. Listed for each activity are its goal, objective, materials (primarily common objects readily available at home or at school), and procedure.

Two indices list the activities in order of presentation in the volume, and developmental age level; a third lists behavioral interventions according to the type of behavior problem they address (self-abuse, aggression, disruption, repetition, or other deficit behaviors). Either a full case illustration or a brief example is given for each intervention, along with an estimated language age and the general level of receptive language of a child with whom that intervention was used successfully.

This volume supplements the earlier two volumes in this series, which provide information on: a) how to assess the autistic child and generate a profile of his/her skills and learning problems in the first seven function areas listed above; and b) how to translate the assessment data into effective teaching strategies and techniques.

Schopler, E., Lansing, M., & Waters, L., eds. **Individualized Assessment and Treatment for Autistic and Developmentally Disabled Children, Vol. III: Teaching Activities for Autistic Children.** University Park Press, 300 North Charles Street, Baltimore, MD 21201. 258 p. 1983. $69.95.

Getting Along with Others: Teaching Social Effectiveness to Children describes a direct intervention approach combined with systematic instruction to help students develop social behavior skills. The program can be implemented in a variety of primary, elementary and middle school settings with children with serious social adjustment and special education needs. A guide and an activity book provide the teacher with methods for determining personal expectations of social behavior, methods for dividing behaviors into their components, techniques for teaching the necessary skills, and approaches for using the students' ongoing social interactions as learning situations.

The *Skill Lessons and Activities* book provides the structure and scripts for 17 lessons that cover such areas as following and asking for directions, giving and receiving feedback, sending messages, holding conversations, sharing, helping, and compromising. Each lesson follows a similar pattern and builds on previously learned skills. Lessons begin with a review of homework and relaxation exercises. New ideas are introduced and examples are role-played first by the teacher and his or her assistant and then by the children. Students are then led through a reality check. Children who exhibit the social skills presented in prior lessons are given a snack; others work with the teacher to improve deficiencies. Activity time provides practice, Home Notes allow for feedback to both parents and students, and homework assignments structure applications of newly acquired behaviors. The *Program Guide,* a training manual for the teacher, includes a rationale, theoretical information and a step-by-step process for learning how to implement the program. Training materials include instructions for applying five behavioral strategies as vehicles for carrying out social skill training.

Jackson, N. F., Jackson, D. A., & Monroe, C. **Getting Along with Others: Teaching Social Effectiveness to Children.** Research Press, Box 31773, Champaign, IL 61821. 1983. $29.95.

(This review will appear in a forthcoming issue of *Teaching Exceptional Children.)*

Unlocking Doors to Friendship, a book written for junior and senior high teachers, provides activities and suggestions to foster students' positive self concepts while encouraging them to explore their feelings and attitudes toward others. Through facilitation of social interaction skills, the book's purpose is to assist with the classroom integration of students who may have difficulty being accepted by their peers because of a physical or mental disability, poor social adjustment skills, racial or cultural differences and/or physical unattractiveness. The intent is to offer teachers activities that they can easily integrate into their curriculum, rather than teaching affective development as a separate subject. Theoretical information, research, and successful teaching approaches provide background on helping change the attitudes of the "established" student toward the "isolated" teen. Separate chapters describe activities for development of positive self concept, examining one's self, and fostering good relationships with others. Activities are grouped for inclusion in the English, communications, social science, career education, science, and physical education curricula. Grade levels, objectives, materials, directions, time needed and explanatory notes are provided for each lesson. Poems and short essays written by students are interspersed throughout the book. The authors also wrote **Communicating to Make Friends,** a similar volume for teachers of younger children.

Fox, C. L., & Weaver, F. L. **Unlocking Doors to Friendship.** B. L. Winch Associates, 45 Hitching Post Drive, Building C, Rolling Hills Estates, CA 90274. 1983. $12.95

(This review appeared in *Teaching Exceptional Children,* Fall 1983, 16(1), p. 73.)

The **Behavior Evaluation Scale (BES)** is designed to assist in decision making concerning diagnosis, placement, and programming for children and adolescents with emotional disturbance/behavior disorders. It can also be used as a general behavior rating scale with regular class or special education students who exhibit behavior problems.

The scale consists of 52 items which represent specific observable and measurable behaviors. Each item is associated with a subscale corresponding to one of the five characteristics of the Bower (1959) definition of behavioral disorders/emotional disturbance included in Public Law 94-142. The items were developed and validated by special education professionals on the basis of the prevalence and severity of the behaviors; the scale was standardized on 1,018 students in ten states in grades K-12. A procedure for deriving local norms is provided. Reliability and validity data reported for the scale include measures of internal consistency, test-retest reliability, content validity, criterion-related validity (measured by correlation with the Behavior Rating Profile), and construct validity (diagnostic and item validity and subscale interrelationships).

Administration of the BES takes approximately 10 to 20 minutes per student. It should be completed by a professional with ample opportunity to observe a student in different contexts over time and with primary instructional responsibility for the student. Ratings need not occur during direct observation of the student. The rater notes the frequency of each behavior, ranging from 1 (never or not observed) to 7 (continuously throughout the day) on the Student Record Form. The rater then transfers item ratings to the Data Summary Sheet, which includes weightings for each item (based on the severity or seriousness of each behavior), grouped into five subscales. Standard scores allow comparison with national or locally-derived norms, and are added to yield a Behavior Quotient (a global index of a student's behavior). A profile form is also provided. An optional form, the Data Collection Form, facilitates measurement of ongoing individual student progress over time on specific scale items. The complete kit consists of an examiner's manual, 50 Student Record Forms, and one sample Data Collection Form.

McCarney, S. B., Leigh, J. E., & Cornbleet, J. A. *The Behavior Evaluation Scale.* Educational Services, P.O. Box 1835, Columbia, Missouri 65205. 1983. $30.00.

RESEARCH BRIEF

Study Explores Effects of Differential Labeling

In this study of the effects of differential labeling on professional concepts and attitudes toward the emotionally disturbed/behaviorally disordered, sixty regular and special education undergraduate and graduate students were administered one of two modified forms of the Multidimensional Attitude Scale on Mental Retardation – one which assessed perceptions toward the emotionally disturbed (ED), and one which assessed perceptions toward the behaviorally disordered (BD). Included in the scales are two dimensions of particular interest in this study: a) integration-segregation, or the rater's position on integration of the target group (either emotionally disturbed or behaviorally disordered) into the regular classroom; and b) private rights, or the rater's perception of the rights of those who would be oppositional to ED or BD individuals.

Raters were significantly more positive in their overall attitudes toward the behaviorally disordered than toward the emotionally disturbed; both preservice and inservice educators favored the behaviorally disordered over the emotionally disordered in regard to integration into mainstream classrooms. Similarly, raters of the BD scale emphasized responsibility of insuring the rights of the BD over the private rights of those who might be in opposition to them (e.g., landlords, school personnel) to a greater degree than did raters of the ED scale. (Sample item: "If I were a school principal I would resent it if I were told that I had to serve emotionally disturbed children.") Included are implications of the finding that labels influence teacher perceptions in the areas of mainstreaming potential, overall life chances, and educability. It is suggested that quantitative as well as qualitative behavioral descriptors accompany labels.

Feldman, D., Kinnison, L., Jay, R., & Harth, R. **The Effects of Differential Labeling on Professional Concepts and Attitudes toward the Emotionally Disturbed/Behaviorally Disordered.** *Behavioral Disorders,* 1983, 8(3), pp. 191-198.

Pennsylvania Resources and Information Center for Special Education (PRISE) is a project funded by the Pennsylvania Department of Education, Bureau of Special Education, through P.L. 94-142, and is administered, managed and supervised by Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

Marianne Price, Project Director
Phil Juska, Assistant Director

PRISE reporter

issues and happenings in the
education of the physically handicapped
no. 15, March 1984

pennsylvania resources and information center for special education 200 Anderson Road, King of Prussia, Pa 19406. 215/265-7321

ROBERT WILBURN–Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN–Chief,
Division of Federal Programs and Special Projects

RETURNING THE HEAD INJURED STUDENT TO THE SCHOOL: A TEAM APPROACH

William R. Bauer, M.Ed., CRC
Director of Education
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During the last ten years, medical techniques have significantly increased the survival rate of individuals suffering traumatic head injury. In addition great strides have been made in the field of rehabilitation in recognizing and remediating the effects of such injuries on the cognitive processes. The combining of these skills has helped bring us to a point where the needs of head injured individuals must now also be addressed by educators, since many of the injured are students who can be expected to require educational services. A networking of such medical, rehabilitation and educational skills offers an effective array of services to maximize the recovery and successful functioning of the head injured student.

In the past, an individual who suffered a serious closed-head injury would typically spend some time in an acute care hospital followed by a period of treatment in a rehabilitation center. If the patient returned to a close proximity of pretrauma physical mobility, it was often considered a "successful rehab." Unfortunately, the individual might find himself or herself unable to function in the family, the school, or the workplace at a level that even approximated his or her functioning prior to the accident. However, such a person's problems generally have little to do with physical functioning, but are manifestations of cognitive deficits which result from severe head injury.

In my experience, I have found that treatment of severely head injured patients often reflected the belief that either a return to the "normal" environment would take care of any of the patient's adjustment problems, or that damage to brain cells was irreversible and no particular course of action would make a significant difference. Both treatment approaches leave something to be desired, and neither will generally remediate sensory, attention, perceptual, language, memory, and judgement deficits after a head injury.

Cognitive Rehabilitation Should Begin Early

Professionals in the field are now very much aware that there is a viable and effective option—the use of cognitive rehabilitation, or the educational process of retraining or compensating for deficits. The provision of services aimed at cognitive rehabilitation should be initiated as soon as the injured individual begins to show generalized response to his or her environment. The recovery of cognitive functioning usually follows a pattern that can be divided into eight stages, according to the scales developed at Rancho Amigos Hospital in California. Briefly, these stages are:

1. **No Response**—Deep sleep or coma.
2. **Generalized Response**—Inconsistent reaction to stimuli in a non-specific way. Responses are limited, random, gross, and may be delayed.
3. **Localized Response**—Specific but inconsistent responses to stimuli. Patient may show some body awareness and some response to familiar people.
4. **Confused-Agitated**—Heightened state of activity with severely decreased ability to process information. Patient responds to internal confusion. Behavior may be bizarre, nonpurposeful, aggressive, and generally inappropriate, and attention span may be very brief.
5. **Confused-Inappropriate**—Individual may seem alert but gives fragmented responses. May also exhibit severe memory impairment and confusion of past and present. Responses may be out of proportion to external stimuli, and verbalizations may be inappropriate.
6. **Confused-Appropriate**—Person seems alert and responses are generally appropriate, but may be able to follow only simple directions and may exhibit decreased ability to process information. May be functional for usual activities of daily living, but may give some incorrect responses due to memory problems.
7. **Automatic-Appropriate**—Person can now go through automatic daily routine, exhibits increased self-awareness, but still lacks realistic planning skills. Learning rate is still decreased, and problem solving skills may still be impaired.
8. **Purposeful-Appropriate**—Person is alert and oriented, recalls and integrates past and recent events and shows carry-over for learning. May be independent in home and community skills, but still exhibits decrease in quality and rate of information processing, abstract reasoning and judgment. Decreased social and intellectual capacities are still evident.

(continued on next page)

Editor's Note: Each year approximately 400,000 to 600,000 people in the United States suffer head injury severe enough to require hospitalization for inpatient care. An estimated 30,000 to 50,000 of these victims never fully recover. The adolescent and young adult population is most at risk with two out of three victims falling under the age of 30. Many of those who are school age are eventually referred to special education programs in the public schools.

During the past year and a half, PRISE has received numerous requests for information about severe head trauma. Recognizing that special educators need information about head injury, the decision was made to devote an issue of the **PRISE Reporter** to this topic.

Marianne Price

Rehabilitation Stresses Compensatory Strategies

During the early and middle stages of recovery, the patient will be treated by a Head Injury Treatment Team in a comprehensive rehabilitation center. In addition to medical and physical services, the team will provide educational/cognitive rehabilitation services. The latter will occur primarily in individual or small group settings, as the injured person is unlikely to be able to function in a classroom. Levels of attention, concentration, language and perceptual processing, thought organization, memory skills, and behavior are not generally consistent enough to support full classroom participation.

During these stages, the team's Cognitive Rehabilitation Specialist will focus on maximizing residual functioning and providing the patient with the compensatory strategies and modifications needed to respond more appropriately to stimuli at ever-increasing levels of complexity. Compensatory strategies are simply methods that allow the patient to approach a problem or situation using organized plans or cues. An example might be the use of color-coded cards for each step of a mathematics problem so that the completion of a section and the need to go to the next step are more evident to the student.

As the patient regains functioning and begins to internalize compensatory strategies in the later stages of recovery, a Special Education Teacher who works in the rehabilitation center will become an active member of the Head Injury Treatment Team. Although the patient is not ready to return to a "regular" or even a Special Education class, it is now time to try the compensatory skills and strategies in a complex environment that more closely approximates the stimulation of the individual's "real world," i.e., school.

Teacher Assesses Student's Skills For Re-entry

The first step in the classroom re-entry process should involve the administration of a complete battery of educational diagnostic tests to determine the strengths and weaknesses of the head injured student. Based on the results of this formal testing, the integration of the student into small groups in a rehabilitation center classroom can begin. This limited exposure allows for a functional assessment of the residual skills the student possesses and provides the teacher with a baseline from which to begin adapting materials and instruction. The focus of the teacher at this time is on developing cognitive reorganization skills and strategies that can be used by the student. As the student demonstrates increased attention, tolerance, and cognitive ability, the time spent in the classroom is increased, as is the level of complexity of the tasks and the involvement with the larger group.

As the student progresses, more complex skills must be stressed by the teacher which will lead to success. For example, in order for a student to function in a group, he or she must be able to wait his or her turn, not respond impulsively, and concentrate not only on the subject at hand but on the comments and contributions of other students as well as those of the teacher. Thought organization and memory skills must be at a sufficiently high level to allow for the choosing of the correct materials for the subject at hand, remembering and following a schedule, and attending to a lesson.

Group skills such as anticipating expectations and responses of others are also general requirements in the classroom. The ability to comprehend more complex material is slow to return in many head injured students, and abstract concepts are difficult for them to understand. The ability to generalize concepts is also slow to return, and students may have difficulty with skills such as recognizing that an addition problem on the chalkboard is still an addition problem when presented on a worksheet, and that it requires the same approach to arrive at a solution.

Student Placed in Special Education Class

Since the head injured student requires extensive therapy, the next step in the educational process ideally would be placement as a day student in a Special Education class in a comprehensive rehabilitation center. Access to an experienced Head Injury Treatment Team is available there, and the teacher is likely to need the team's support in developing effective strategies for the student. Many of the problems the student will later encounter in a full-time school placement in the community can be recongized and dealt with in this more protected setting. Such a placement is also valuable to the student and his family, as it offers a smooth transition from hospitalization to living at home while providing continuity and support from a familiar treatment team during the initial period of adjustment.

While the student is in a full-time day placement in the rehabilitation center, the local educational agency must be kept aware of his or her status and progress. Appropriate representatives from the district or intermediate unit should be involved in treatment meetings, classroom observations, and conferences with the parents and the student. When placement in the community is appropriate, members of the Head Injury Treatment Team need to visit the school, talk with the teachers and administration, and participate in the development of an IEP that offers an appropriate program for the student.

As a recent public awareness campaign by the National Head Injury Foundation indicates, "Life after head injury is never the same." Many head injured students will require Special Education rather than returning to the regular education mainstream on a full-time basis. According to individual needs, the program may range from a full-time Special Education placement to regular education placement with Resource Room support for particular deficit areas. In any case, the Head Injury Treatment Team should provide as much information and training as possible regarding strategies, levels, special needs and techniques that have proven effective in the full-time school placement at the rehabilitation center.

CURRENT CITATIONS

Frazer, B. A. & Hensinger, R. N. **Managing Physical Handicaps: A Practical Guide for Parents, Care Providers, and Educators.** Paul H. Brookes, P.O. Box 10624, Baltimore, MD 21204. 1983. 246 p. $17.95. This book addresses the practical concerns that parents and school personnel must consider in the delivery of programs to moderately physically handicapped and multi-handicapped youngsters. One area of concern which is discussed is defining the goals of the physical therapy program and the role of the physical therapist. The authors describe a service delivery model they helped to develop over an 8-year period in the Wayne County Intermediate School District, Michigan. The goals of their program include: 1) improving comfort and correcting abnormal posture when possible; 2) maintaining or improving joint flexibility; 3) preventing further deformity to the degree practicable; 4) maintaining surgical corrections; 5) providing mobility through gross motor activities and selection of appropriate seating and transportation systems; and 6) assisting the impaired student to adapt physically to varied environments. The role of the physical therapist under this program is one of acting as a consultant to the classroom staff and parents, who carry out the majority of the "hands on" therapy.

Another area of concern is helping parents and school personnel to understand the types of physical problems found in severely impaired children and practical approaches to managing these problems in a school setting. After a basic description of normal body movement, the authors discuss: 1) abnormal joint conditions that restrict normal motion in the spine, arms, and legs; 2) abnormal muscle tone and reflexes that affect posture; and 3) balance reactions. Also provided is practical guidance on positioning, lifting and transporting physically handicapped students.

Severe Head Trauma: A Comprehensive Medical Approach (Collaborative). A report to the National Institute for Handicapped Research by the Institute for Medical Research at Santa Clara Valley Medical Center, 751 South Bascom Ave., San Jose, CA 95128. 1982. $27.00. This study was undertaken by the Physical Medicine and Rehabilitation Department at the Santa Clara Valley Medical Center in San Jose, California. The project, which took place between November 15, 1977 and August 15, 1981 had the following objectives:

- chart the course of recovery from severe head injury with comprehensive rehabilitation services;
- develop a model head injury rehabilitation program;
- identify rehabilitation problems; and
- disseminate information regarding head trauma and its treatment.

This report comprises two volumes, with Volume I providing an introduction and overview of head injury problems as well as information on the incidence, prevalence, etiology and economics of the problem. Subsequent chapters describe the organization of the project and the model head injury care concept developed at the Center. The characteristics of patients included in the study, the methodologies employed to collect and analyze the data, and the limitations of the data and the analyses are also described. The results of the study are discussed, with particular emphasis on the natural course of recovery of various skills and functions in head injury patients over a two-year period.

Volume II presents special data analyses prepared by most of the disciplines that participated in the study. Each provides information on the background and state of the art in that discipline, methods used to assess patients, and their progress. The course of patients over time, using the measures employed by each discipline, are discussed and conclusions drawn about implications for care based upon findings. Finally, each of the participating disciplines offers suggestions for future studies.

DISSEMINATION HAPPENINGS

Head Injury Research Centers Funded

Four head injury rehabilitation research centers are funded by the National Institute for Handicapped Research. You may request information by contacting the centers/institutes as follows:

Research and Training Center on Brain Trauma
Contact: Dr. Y. Ben-Yishay, New York University Medical Center, School of Medicine, 550 First Avenue, New York, NY 10016.
Telephone 212/340-6157.

Rehabilitation Research and Training Center
Contact: Dr. John Banja, Director of Training, Emory University, School of Medicine, 1441 Clifton Road, N.E., Atlanta, GA 30322.
Telephone 404/329-4804.

Rehabilitation Institute of Chicago/Northwestern University
Contact: Dr. Henry B. Betts, Project Director, Department of Rehabilitation Medicine, 345 East Superior, Chicago, IL 60611.
Telephone 312/649-6179.

Rehabilitation Research and Training Center
Contact: Dr. Justus Lehmann, Project Director or Deborah Wilkerson, University of Washington, Department of Rehabilitation Medicine, BB919 Health Services Bldg./RJ-30, Seattle, WA 98195.
Telephone 206/543-3600.

National Diffusion Network Program

The following program is available for adoption or adaptation through the National Diffusion Network (NDN). For further information on this or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (RISE), 725 Caley Road, King of Prussia, PA 19406. Telephone: 215/265-6056.

PEOPEL: Physical Education Opportunity Program for Exceptional Learners.

PEOPEL is a specially designed, success-oriented physical education program for high school students with unique needs, which features the utilization of student aides. In order to enhance individualized learning of a variety of physical activities, peer tutors are trained to provide a one-to-one instruction ratio. The handicapped students develop mental, social, emotional and physical abilities at their own pace, and experience success in a variety of activities. There is also a benefit to the peer tutors who receive special teaching instruction and the satisfaction of a helping role. Entry skills are pretested on the basis of performance objectives, and units of instruction are provided to develop improved performance. Objectives are included for history, basic rules, etiquette, terminology, safety and skill progressions.

RESEARCH BRIEF

Study Examines Factors in Rehabilitation Outcome

The purpose of this study was to examine the relationship of medical and psychological factors to adaptive physical function (APF) at discharge from a rehabilitation hospital and to length of rehabilitation stay, following traumatic brain injury. (APF is defined as the performance of self-care skills associated with the ability to live independently.) The sample for the study was comprised of 32 individuals who had experienced severe traumatic brain injury during adulthood (ages 16-55), who were admitted to an inpatient interdisciplinary rehabilitation program within one year following injury, and who had completed standardized testing shortly after admission.

The results indicate that the best predictors of discharge APF status were the assessments of medical status and of APF which were made when the patient was admitted to the rehabilitation program. Both factors were significantly positively related to APF at discharge. The age of the patient was significantly negatively related to discharge APF, i.e. younger patients showed the best overall functional outcome status. Specific psychological factors, such as range of affect and awareness of disability, were not significantly related to APF rehabilitation outcome status. However, when relative improvement was examined, psychological factors at admission were significantly related to improvement in APF during the inpatient rehabilitation program, whereas medical admission status was not. Initial assessments of poor affect and lack of awareness of disability were associated with the greatest relative improvement in APF. The results indicate that the length of rehabilitation stay is correlated with medical factors, APF, and psychological factors.

Torkelson, R.M., Jellinek, H.M., Malec, J.F., & Harvey, R.F. **Traumatic Brain Injury: Psychological and Medical Factors Related to Rehabilitation Outcome.** *Rehabilitation Psychology*, 1983, 28(3), pp. 169-176.

TEST

The **Test of Nonverbal Intelligence (TONI)** is an individually administered, language free measure of cognitive ability designed for use with individuals who range in age from 5-0 to 85-11 years who are unable to read or write, have poor linguistic skills, or are mentally retarded, learning disabled, deaf, or culturally different. Directions are pantomimed, and the subject responds with manual gestures. The test authors indicate that the content and administration methods are appropriate for use with the physically handicapped, but physically handicapped individuals were neither deliberately included nor excluded in the standardization group. The test is untimed and takes approximately 15 minutes to administer. Two alternate forms each contain 50 items, which involve problem solving through identification of relationships among abstract figures. The subject must point to the response that best fits a missing part in a pattern or matrix.

The **TONI** was standardized on nearly 2,000 individuals in 28 states; the authors encourage the development and use of specialized local norms for use with handicapped populations. Test results may be reported as percentile ranks and as **TONI** Quotients, which are deviation standard scores with a mean of 100 and a standard deviation of 15. Data on internal consistency and alternate form reliability, concurrent and construct validity are reported. The test kit consists of the **TONI** manual, picture book, and 50 answer sheets for each form.

Brown, L., Sherbenou, R. J., & Dollar, S. J. **Test of Nonverbal Intelligence (TONI): A Language Free Measure of Cognitive Ability.** Pro-Ed, 5341 Industrial Oaks Blvd., Austin, TX 78735. 1982. $63.00 Complete Kit.

INSTRUCTIONAL MATERIAL

Making Friends is designed to 1) facilitate friendships between handicapped and nonhandicapped children in grades two through five, and 2) to teach the skills required to make and keep friends. The program has four components: a poster, three ten minute films (videotapes and captioned versions are also available), a discussion guide, and a skills training guide. The **poster** is used to introduce the students to the children they will see in the films. The **films** depict handicapped and nonhandicapped children exploring what friendship means, who can be a friend, how to make friends, and problems and solutions in maintaining friendships. The **discussion guide** includes lesson plans to be used in conjunction with each film. The **skills training guide** consists of instructional lessons designed to teach youngsters the behaviors they need to know in order to make friends and keep friends. The friendship skills stressed include nonverbal attending, verbal attending, observing, listening, knowing what another feels and why, knowing what you feel and why, making plans to play together, and resolving differences.

Carkhuff Institute of Human Technology; The Production House, Inc., Essex, MA 01929; $400.00 (film version), $200.00 (video-cassette package).

NEW FILM

Kathy is a film about a high school student who is severely physically disabled as a result of being born with Osteogenisis Imperfecta, a brittle bone disease. Kathy talks about her adjustment to school; her classmates talk about their adjustment to Kathy. She is 18 years of age, weighs 35 pounds, and uses a wheelchair. The film shows Kathy participating in a musical program, practicing for a state competition in storytelling, and graduating from high school. Throughout the film emphasis is placed on Kathy's self-acceptance, independence and positive thinking. She discusses her plans for the future—completing her college education and sharing an apartment with a friend. She also shares her need to be active and her concern that she not become housebound.

16mm/color/sound/27 minutes/1981/$450.00

Film Ideas, 1155 Laurel Ave., Deerfield, IL 60015.

Pennsylvania Resources and Information Center for Special Education (PRISE) is a project funded by the Pennsylvania Department of Education, Bureau of Special Education, through P.L. 94-142, and is administered, managed and supervised by Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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issues and happenings in the
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no. 15, April 1984

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ROBERT C. WILBURN–Secretary of Education,
Department of Education, Commonwealth of Pennsylvania

Dr. WILLIAM F. OHRTMAN–Chief,
Division of Federal Programs and Special Projects

MANAGEMENT OF THE YOUNG STUTTERER IN THE CLASSROOM

Russell Morley
Supervisor of Speech & Language Services
Montgomery County Intermediate Unit
Erdenheim, PA

Stuttering, whether in children or adults, is a widely misunderstood communication disorder. There are misconceptions about the nature and development of stuttering and how it should or should not be managed. Educators' awareness of the severe penalties, frustrations, and fear often suffered by stutterers in their educational achievement, social relationships, and vocational aspirations may also negatively influence the teachers' ability to work purposefully with stuttering children.

Until the past decade, scientific investigation has been directed toward stuttering only after the disorder was fully developed. Early identification and treatment of stuttering in young children was largely ignored More recently, however, the failure of speech/language pathologists to find a solution to the problem of stuttering has resulted in research efforts being directed toward the disorders of three to eight year old children.

In the past, leading authorities in the field had strongly advised against identifying and labeling non-fluent speech behavior in young children as stuttering. Such advice was drawn from several research efforts which inferred that early identification, labeling, and direct therapy intervention may result in either:

1. establishing stuttering in "normally non-fluent" children, or;
2. contributing to the development and increased severity of a problem that might otherwise resolve itself.

Parents were instructed not to draw attention to non-fluencies in their child's speech, and clinicians worked with the parents rather than the child. These practices were predicated on the theory that such behavior was common and that by ignoring it, the child would likely outgrow it. No attempt was made to develop the child's awareness of non-fluencies, nor was he taught to modify his speech behavior.

Child-Centered Therapy Approaches Developed

Over the past decade, new therapy intervention procedures, in direct contrast to those practiced previously, have been developed. Speech and language clinicians are now better equipped to differentiate the "normal non-fluencies" characteristic of all young children from speech behavior indicative of a beginning stuttering problem. In addition, successful, direct, child-centered therapy approaches have largely eliminated the long standing dogmatic fears associated with such intervention practices. While speech and language clinicians are not ready to announce that all problems associated with stuttering have been solved, it is apparent that improved understanding of the problem has resulted in more effective means of prevention and remediation with young children.

Traditional speech and language screening procedures implemented in school settings for identifying children with communication problems are often ineffective in identifying early stuttering. The nature of stuttering in its earliest stages of development is episodic. Children often experience periods of complete fluency, and thus the problem may not be apparent during the screening process.

Identification of "Danger" Signs Crucial

Therefore, it is critical that parents and classroom teachers become knowledgeable concerning the "danger" signs that differentiate normal non-fluency in children from beginning stuttering behavior. If a child evidences *one* or *more* of the following speech behaviors, he should be referred immediately to a speech and language clinician for further observation and assessment.

1. Non-fluencies occur at the rate of 10 or more per 100 words spoken, of the following types:
   a. repetition of initial sound/syllable of a word ("muh-muh-muh- May I have some?") where the number of sound/syllable repetitions is three or more per block;
   b. prolongation of initial sound/syllable ("I ssssaw a dog.");
   c. silent, postural block – child trying, but unable to get speech started ("Mommy," *silence* "give me some more!").
2. In repetitive or prolongation blocks, child substitutes the inappropriate sound for the vowel sound (buh-buh-buh-buh-beet).
3. Non-fluencies are long in duration and very effortful for the child.
4. The child shows surprise, frustration or fear regarding speech non-fluencies.

(continued on next page)

Editor's Note: This issue of the **PRISE Reporter** focuses on current developments in evaluating and remediating the problem of stuttering. The material indicates there is a new thrust to begin treatment at an early age and to stress the involvement of parents and the classroom teacher.

Marianne Price

Effective intervention requires a cooperative team effort involving the child's parents, teachers, and the speech and language clinician. Pre-school children and early elementary school children are unable to self-monitor their own speech or practice remedial techniques without the assistance of an adult. The speech and language clinician is limited to one-half to an hour of direct contact with the child each week and thus cannot provide the monitoring required for successful fluency modification. However, the classroom teacher, in consultation with the speech and language clinician, can contribute on a daily basis to a young child's awareness and use of fluency facilitating behaviors in the classroom. Providing intermittent reminders and encouragement throughout each school day greatly increases the chances for successful remediation of stuttering.

Stimulating for, and reinforcement of, fluency facilitating target behaviors can be done by the classroom teacher within the context of everyday instruction. Such assistance does not require that separate time be set aside nor specific activities be developed for the child. The teacher should be aware of the specific target behaviors the student is practicing in speech and how frequently the child should be reminded to use them in the classroom. Obviously, all attempts by the student to practice fluency facilitating behaviors should be reinforced.

Complete remediation of stuttering is now a realistic, achievable goal when treated during its early developmental stages. If permitted to persist, it can become a severely handicapping problem with a diminished remedial prognosis.

Let's Talk: Developing Prosocial Communication Skills is an interactive instructional package designed to develop and reinforce the social communication skills of pre-adolescents, adolescents, and young adults with language disorders or language differences. The program consists of a manual, communication score sheets, and nine communication card games. The first section of the manual includes background information on communication functions and competencies, factors influencing communication behaviors, and a communication skills checklist which may be used to evaluate a person's ability to perform various communication functions. Section two details 33 communication skill training activities, each of which features a single speech act within one of the four levels of communication function (ritualizing, informing, controlling, and feeling). Each of the 33 training activities includes its objective, instructions to the student, the components of the speech act being developed, directions for a demonstration, and suggested variations. A sampling of the skills includes: introducing oneself, saying farewells, leaving telephone messages, offering assistance, making a complaint, expressing appreciation, and apologizing.

The third section of the manual deals with the nine communication card games designed to help the students maintain, generalize, and adapt the communication skills acquired through the 33 training activities. Five of the games (Getting Around Town, Shopping, Telephoning, Getting a Job, and Serving People) focus on functional communication skills within specific settings. The other four (Asking for Favors, Making Dates, Sharing Feelings, and Dating) feature specific communication intents. Three appendices detail the results of three field tests involving children with learning disabilities, language disabilities, childhood aphasia, emotional disorders, or cognitive dysfunctions as well as adults with acquired aphasia.

Let's Talk: Developing Prosocial Communication Skills. Charles E. Merrill Publishing Co., 1300 Alum Creek Drive, Box 508, Columbus, OH 43216. $82.95 (complete set).

Systematic Fluency Training for Young Children is a program based on two premises: 1) direct intervention with the beginning stutterer is necessary, and 2) the intervention should focus on the modification of physiological speech processes in order to attain fluency. Intended for use with children ages 3 through 9 years, the program addresses both assessment and fluency training. Assessment procedures include training in identification of stuttering and administration of the *Systematic Fluency Training for Young Children Assessment Form,* followed by a parent interview.

The fluency training leads the child in a step-by-step progression through a series of speaking voices toward normal speech. Treatment is initiated by having the child speak fluently in either a "whispered speaking voice" or a "prolonged speaking voice." The objective is to have the child be able to say four-to-six word sentences for two minutes with total fluency. In the second step the child learns to use an "easy speaking voice." This voice has slightly loose articulatory contacts, slight breathiness and intonation, slightly prolonged rate, and slightly reduced loudness. Steps 1 and 2 are carried out by the speech clinician in a minimum of two 40- to 50-minute sessions per week.

In the third step the child learns to use a "new speaking voice" which means that all parameters of speech are normal. It is at this point that therapy involves "significant others," i.e. anyone who spends a significant amount of time with the child. The significant other is trained by the speech clinician and works with the child three times per day for 5-10 minutes each time. Together the clinician and the significant other carry out fluency training, using the program's materials for Picture Identification, Story Book, Picture Matching, Surprise Box, Transfer and Maintenance. The program includes a detailed manual of instruction, picture stimulus cards, lotto games, surprise toy box, story books, recording forms, and a training cassette.

Shine, Richard E. **Systematic Fluency Training for Young Children.** C.C. Publications, P.O. Box 23699, Tigard, OR 97223-0108. $149.95.

Cole, Jack T., and Cole, Martha L. **Language Lessons for the Special Education Classroom.** Aspen Systems Corporation, Rockville, MD 20850. 1983. 193 p. $38.95. Written for those professionals responsible for teaching language to special children, this book offers 250 complete lessons relating to receptive or expressive language. Evaluation methods are built into every lesson. Also included are guidelines on how to develop and enrich a language curriculum, techniques and materials for parent involvement, and lists of free and inexpensive language materials. The looseleaf format enables specific lessons to be removed for classroom use. The language program may be used in its entirety, or isolated lessons can be used to remediate specific areas of weakness. It is adaptable for use with a full class or with individual youngsters.

Gallagher, T. M., and Prutting, C. A., eds. **Pragmatic Assessment and Intervention Issues in Language.** College-Hill Press, Inc., 4580-E Alvarado Canyon Road, San Diego, CA 92120. 1983. 288 p. $22.50. This book is a compilation of chapters individually authored by educators who focus on the use of pragmatic theory to address both assessment and intervention issues in language. Chapters dealing with assessment issues examine the assessment of pragmatic behaviors, as well as the impact of the variability of language use on the development of assessment procedures. Topics concerned with intervention procedures include levels of language knowledge processing, goal setting and goal attainment, and children's questioning skills. Additional chapters, devoted to discussions of non-speech communication, outline the relationship between oral and written language development, as well as the use of gestures of the Amer-Ind code with retarded persons. The final sequence of chapters takes a look at implications for both assessment and intervention. These writings report on the advances of speech-language pathology in clinical assessment and intervention, past and current research in developmental language disorders, and the understanding of communication disorders through the principles of science. All issues covered are addressed from a primarily pragmatic theoretical perspective.

Luper, H. L. (Guest Editor). **Intervention with the Young Stutterer.** *Journal of Childhood Communication Disorders,* Fall-Winter 1982, 6(1), pp. 5-66. This issue is a compilation of related articles on childhood stuttering whose authors define the problem and summarize current knowledge in the field. Methods for diagnosing and evaluating children's speech problems and attitudes toward stuttering are discussed. The importance of a positive communication environment is stressed, and a variety of treatment approaches is considered. Direct modeling and intervention are described as vehicles which emphasize harmony and structure both at home and in the school.

Language-based therapy, which uses the structure of language to enhance fluency, is explained as well as other current therapy programs to increase fluency through the manipulation of language variables. Fluency shaping (the encouragement of slow, normal-sounding, fluent speech) is described, and measures to evaluate progress and maintain fluency are suggested. Finally, methods for helping a child develop healthy attitudes toward talking are discussed, including the importance of acceptance and approval from listeners.

Prins, D. & Ingham, R. J., eds. **Treatment of Stuttering in Early Childhood: Methods and Issues.** College-Hill Press, Inc., 4580-E Alvarado Canyon Road, San Diego, CA 92120. 1983. 160 p. $15.00. This publication is intended for pre-service as well as practicing clinicians and educators concerned with the problems of stuttering in children. The text is based on papers presented at a regional conference held in Seattle, Washington in 1982, and considers the following major topics: 1) the nature of disfluent speech and the disfluencies that characterize stuttering; 2) evaluation of disfluent speech and other factors that form the bases for clinical intervention; 3) direct therapy techniques for working with young children; and 4) recovery and long range outcomes. Both theoretical and pragmatic perspectives are discussed by authors with diverse academic backgrounds, experiences and opinions. Selected issues emerging from the conference are highlighted by the editors in a final chapter.

Williams, John. **Using a Computer to Control Stuttering.** *Rehabilitation Literature,* March/April 1983, 44(3-4), pp. 74-75, 85. Speech therapists, speech pathologists and people with stuttering problems will find this article useful in developing programs to overcome stuttering. The author, who himself overcame a severe speech handicap, describes his therapy program, which is entitled the "Speech Flow Acquisition Program." The SFAP uses a computer speech flow analyzer to train the stutterer to speak smoothly without perturbations of laryngeal function that may become precursors to moments of stuttering. The client learns to slightly prolong the first syllable when he is reinitiating speech after any hesitation or terminal juncture greater than one-half of a second. The speech flow analyzer, an electronic computer that can be programmed to click following a hesitation or terminal juncture of a specified length of time, helps the client monitor his speech. Therapy consists of four tasks: repeating phrases, reading phrases, formulating phrases, and reading out loud and discussing topics. The client's goal is to perform these tasks with one dysfluency or less per minute at a speaking rate of 175-275 syllables per minute.

[illegible]

Keeping Speech Stutter-Free: A Case Study describes the use of the Stutter-Free Speech Program, developed by Shames and Florence, by the Meyer Children's Rehabilitation Institute. It shows how Rodney, a 13-year-old stutterer, increased his ability to use stutter-free speech through a therapy program that involved his parents, the speech pathologist from his local school, and a speech and language pathologist from the Institute.

The Stutter-Free Speech Program is based on the principle that speaking and stuttering are learned behaviors and can be changed. The therapy progresses through four phases. The goal of Phase I, *Volitional Control,* is for the client to be able to speak naturally at a controlled rate of speech and to achieve continuous phonation. Modeling and delayed auditory feedback machines are the instructional techniques used by the clinician during this phase. In Phase II, *Self Regulation,* the responsibility for the management and control of speech is transferred from the clinician to the client. The client initiates deliberate monitored speech, evaluates his progress, and rewards himself by talking with monitored non deliberate speech for short periods of time. In Phase III, *Transfer,* the client transfers his new skill to his own environment. The client develops a behavioral contract which includes strategies for practicing monitored speech in a natural environment. Phase IV, *Training in Unmonitored Speech,* allows the client to replace conscious monitored speech with automatic non monitored talking. Rodney completed Phases I and II at the clinic in five days of intensive therapy. Phases III and IV were completed in his home and school with the help of his parents and the school speech and language pathologist.

3/4" video cassette/color/20 minutes/1982/$80.00

Produced and distributed by Media Resource Center, Meyer Children's Rehabilitation Institute, University of Nebraska Medical Center, 444 South 44th Street, Omaha, NE 68131. **Keeping Speech Stutter-Free: A Case Study** has recently been added to the videotape collection at the Eastern Pennsylvania Special Education Regional Resources Center (ESERRC).

[illegible]

National Diffusion Network

The following program is available for adoption or adaptation through the National Diffusion Network (NDN). For further information on this or other NDN programs, Pennsylvania educators should contact the State Facilitator, Research and Information Services for Education (RISE), 725 Caley Road, King of Prussia, PA 19406. Telephone, 215/265-6056.

Cognitively Oriented Preschool Curriculum

Derived from Piagetian theory, this preschool program offers an open framework model for mainstreaming mildly and moderately handicapped children. Emphasis is placed on identification of each child's status on a developmental continuum by examining his or her strengths and accomplishments. Through designated key experiences for children, and teaching and parenting strategies, the curriculum provides a decision-making framework within which teachers design a classroom program reflecting the needs and interests of the children being served. A "plan-do-review" sequence encourages children to achieve developmental goals by involving them in decision-making and problem solving situations throughout the day.

Study Probes Onset of Stuttering in Young Children

This study was designed to overcome some of the weaknesses of previous studies of the onset of stuttering in young children by 1) reducing the age variance of the children studied to 2 years; 2) shortening the intervals between dates of reported onsets and dates of parent interviews (parent interviews are a valuable source of information concerning the onset of stuttering because it is virtually impossible to conduct direct scientific observations at the time that stuttering first appears); and 3) obtaining speech samples from young children as soon as possible after the onset of stuttering. Subjects were 22 children, 2 and 3 years of age, who were seen for speech evaluations at the University of Illinois Speech and Hearing Clinic. Data were obtained through systematic interviews of the children's mothers, using a 97- item questionnaire covering four areas: personal information, familial background circumstances of onset of stuttering, and health and developmental history.

Results indicated that the mean age of onset of stuttering was 27.8 months, with the mean age for boys occurring 3.1 months earlier than girls. This finding indicates a close temporal overlap between onset of stuttering in very young children and the emergence of complex articulatory and syntactic structures in a child's speech. The indication that the onset in girls is significantly earlier than in boys is in consonance with the fluency, articulation, and language relationship suggested above. An unexpected finding was the similar sex distribution of the sample, 11 boys and 11 girls. In previous studies of the onset of stuttering boys have predominated.

There was greater diversity in the manner of onset than reported in previous studies. Fifty-five percent of the children experienced a gradual onset and 45% sudden onset. Early stuttering was described as mild or easy in 64% of the children and moderate or intense in severity in 36%. The most common overt characteristic of stuttering at the time of onset was repetition of syllables, but other characteristics such as sound prolongations and muscular tension were not uncommon. Finally, results indicated that parents were able to differentiate the onset of stuttering from the normal disfluency that occurs in the speech of 2- and 3-year-old children. Because the number of subjects was small, was mainly representative of the middle class from one geographical area, and was drawn from a clinical population only, no strong conclusions can be drawn. However the trends revealed in the data indicate a need to pursue further age-specific research concerning early stuttering.

Yairi, E. **The Onset of Stuttering in Two- and Three-Year-Old Children: A Preliminary Report.** *Journal of Speech and Hearing Disorders,* 1983, 48(2), pp. 171-177.

Teacher Assessment of Grammatical Structures (TAGS) is a series of criterion referenced rating forms which have been designed to evaluate a child's understanding and use of syntactic structures, and to suggest a sequence for teaching these structures. The **TAGS** rating forms were developed for use with hearing-impaired children who use spoken and/or signed English, but they can also be used for evaluating and teaching normal-hearing children who are seriously delayed in the development of English snytax. The structures tested on the **TAGS** rating forms are organized into three levels: the **TAGS-P** (Pre-sentence Level) is appropriate for use with a child who is using words, phrases and/or three-word sentences; the **TAGS-S** (Simple Sentence Level) is for the child who communicates primarily in simple sentences of four or more words; and the **TAGS-C** (Complex Sentence Level) is for children who have demonstrated some ability to use complex sentences.

On each rating form the syntactic structures are listed in an expected order of development. Ratings are to be completed by the teacher, based on observation of the child in a variety of classroom settings. Each of the syntactic structures is to be rated at four levels of competence: 1) comprehension (rated only on **TAGS-P** level), 2) imitated production, 3) prompted production, and 4) spontaneous production. The rating on each of these levels involves a decision of whether the syntactic structure is *acquired* or *emerging.* The test manual specifies the criteria to be used by the teacher in making the judgments required by the rating form.

Central Institute for the Deaf, 818 South Euclid, St. Louis, MO 63110. 1983. Manual $12.50. Rating Forms $4.00 (pkg. 25).

Pennsylvania Resources and Information Center for Special Education (PRISE) is a project funded by the Pennsylvania Department of Education, Bureau of Special Education, through P.L. 94-142, and is administered, managed and supervised by Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

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PRISE reporter
issues and happenings in the
education of the visually handicapped
no. 15, May 1984

pennsylvania resources and information center for special education 200 Anderson Road, King of Prussia, Pa 19406. 215/265-7321

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TECHNOLOGY AND BRAILLE TRANSCRIPTIONS

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Not since Louis Braille took reading into his own hands and made literacy possible for the blind has society been given the opportunity to provide information so readily to the braille user. The advent of the computer age brought with it a computer terminal which accepts and displays braille, is smaller than a briefcase and offers reading dots which never wear down. Five average braille volumes of information are now storable on an easily duplicated cassette tape. The outcome of today's technology is "paperless" braille.

Several manufacturers worldwide are presently offering cassette braille terminals. The most popular equipment in this country is the VersaBraille, by Telesensory Systems, Inc. of Mountain View, California. This unit has the capability of operating either as a stand-alone system or as a terminal interfaceable with a variety of computers, printers and embossers. Available software enables the VersaBraille to communicate with print terminals and other peripherals, allowing translation from print to braille and vice versa.

One of the problems addressed by the new technology is the time lag between the availability of print educational materials and braille editions of these same materials. Conventional paper braille transcription of textbooks is slow and tedious, and a procedure which invites fatigue. Electronic braille transcription procedures alleviate much of the fatigue factor and the frustration of lengthy re-transcription to correct errors. In addition, the noise which is characteristic of a manual braille writer is almost totally eliminated. By use of the VersaBraille system, generation of a braille master for cassette tape is easily accomplished.

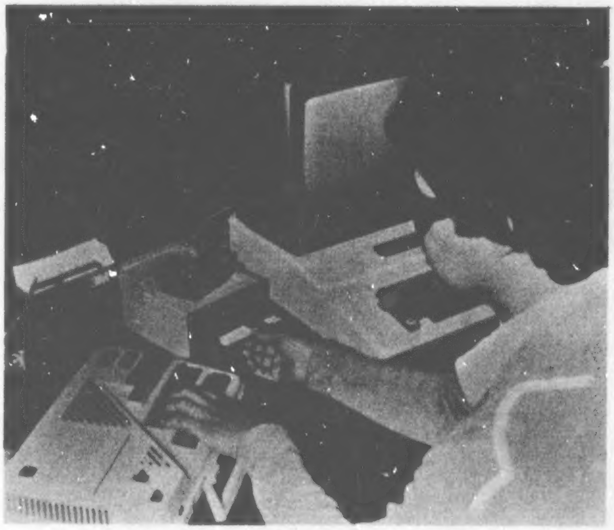
Microcomputer Software Facilitates Braille Production

With the development of appropriate software, it is now possible to produce braille text using microcomputers. The first programs to become available for transcription applications were written for the Apple computer, and these are still the major programs being used by transcribers.

The most widely used program is BRAILLE-EDIT by David Holladay of RAISED DOT COMPUTING, Lewisburg, Pennsylvania. BRAILLE-EDIT has a two-fold function. First, it can be used as a word processor with editing capabilities, permitting data to be transmitted either to cassette tape for VersaBraille use or to an embosser for paper braille output. Secondly, the BRAILLE-EDIT provides an efficient forward and reverse translator. This means that print can be converted to grade two (contracted) braille, and the reverse can also be accomplished. Any problems which might appear when translating print to grade two braille can be easily identified and screen-edited by a competent braillist, before producing the user copy.

A project in Virginia (Reading Electronic Braille), which was made possible through a federal grant, has been a leader in formulating techniques for transcribing textbooks, using the electronic system. Volunteer transcribers at the Virginia Department for the Visually Handicapped, trained in the use of the VersaBraille have already produced numerous secondary level textbooks in cassette braille. For those who wish to produce their own materials, guidelines for transcribing cassette braille are now being disseminated upon request by the Department.

Many of the problems which occur in the mainstreaming of blind students are also alleviated by the use of paperless braille. The ready provision of a braille version of an educational text is often required, and the new system offers a means of speedy production. In addition, VersaBraille materials eliminate the problems involved in transporting and storing numerous bulky volumes of paper braille books. The VersaBraille stores 400 pages of brailled information on a 60 minute, two track cassette, the equivalent of a textbook which can be carried in one's back pocket. Also, the fact that



A vision student operates the VersaBraille, utilizing a personal computer.

the VersaBraille is lightweight, portable, and quiet makes it efficient for taking notes in the classroom.

VersaBraille System Organizes Information

An additional challenge which the VersaBraille meets is the presentation of material in a manner which is easy to read and comprehend. First, we must understand how a VersaBraille cassette is formated. Information is organized on the cassette much as it is in a book. Included are an index of chapter titles, individual chapters, and pages. For example, a student using the VersaBraille cassette might designate one chapter "Math Homework," with a page for each day's assignment. Thus, the student can easily locate material when it is needed.

A section of the cassette tape which becomes a page is limited to 1000 braille cells (character spaces). This is also the maximum number of cells available on a paper braille page of 25 lines of 40 cells each. The tape page, however, is based on a linear concept (one continuous line) instead of 25 lines per page.

Although the reading display line on the VersaBraille shows only 20 cells at any one time, it is a partial viewing of a much longer line, similar to a lengthy print cash register tape of purchases. You see only a little of the whole at any one time. Under these circumstances, there is no tracking problem. When the student has read the current display, he can call for the next 20 cells by simply tapping the bar located adjacent to the display line. When he reaches the end of the material on a tape page, like any other book, he turns to the next page. This requires tapping a close-by key and the adjacent bar which accesses the next line of 1000 character spaces.

Linear System Saves Space

In reality, more characters can be brailled on a tape page than on a paper page, since paper braille requires leaving entire lines unused in order to present materials in an easily comprehensible format. For example, in paper braille as many as 20 cells of the last line of a paragraph are often not utilized. To enable the VersaBraille user to comprehend the beginnings and endings of a paragraph, an easily identifiable two-cell braille symbol has been devised. Additional symbols are available to designate any break in the linear material, such as a vertical list of items or multiple choice answers to exercises. In some instances a student may wish to create his own system of symbols as he enters material, in order to facilitate retrieval.

The advances in today's computer technology are already widening the horizons for the blind student. Educational materials are more compact, easier to comprehend, more readily available, and offer savings in time. The use of such systems as the VersaBraille, with its compatible peripherals, will undoubtedly continue to expand educational and vocational opportunities for the blind.

INSTRUCTIONAL MATERIAL

The **Light Box** is designed for developing use of low vision and can be used in conjunction with its own unique set of materials. It can stimulate awareness of light and colored objects as well as assist in instruction of tracking, scanning, eye-hand coordination, visual discrimination, and a variety of visual perceptual skills. The box consists of a translucent white plexiglass work surface illuminated from below, which provides an even high-contrast background for opaque materials, and a source for explosion of intensely colored transparent items. An electronic dimming control permits adjustment to the level of illumination to meet the needs of individual students and to assist them in transferring skills to a normally lit environment.

The **Light Box** can be used as a light table or tilted at one of three positioning angles; non-slip rubber feet provide for upright placement. Built-in plastic container clips hold overlays in position regardless of box position. Cool, efficient flourescent light provides long life and is housed within a tough plastic box 25" x 15" x 5". It is safe for children, U.L. approved, and appropriate for all ages.

Light Box Instructional Materials (Level 1) are available for use with visually handicapped and multi-handicapped students ages 0-4, for training in basic visual skills, eye-hand coordination, and simple matching. Level 2 Materials will become available in February, 1985.

American Printing House for the Blind, P.O. Box 6085, Louisville, KY 40206-0085. Light Box $331.70; Light Box Instructional Materials (Level 1) $224.77.

CURRENT CITATIONS

Mangold, Sally S., ed. **A Teacher's Guide to the Special Educational Needs of Blind and Visually Handicapped Children.** American Foundation for the Blind, 15 West 16th St., New York, NY 10011. 1982. 153 p. $8.00. This guide was developed in response to a 1979 survey of teachers of the visually handicapped to determine the educational needs of their students. The result is a multidisciplinary approach for teaching the visually handicapped. Authors include mobility specialists, curriculum developers, and teacher trainers. Each chapter focuses on a particular educational need. Chapter titles include: Teaching Nonacademic Skills; Science Activities for the Visually Impaired; Nurturing High Self-Esteem in Visually Handicapped Children; and a Special Education Introduction for Normally Sighted Students. This last chapter deals specifically with preparing students for the inclusion of a visually impaired child into their regular classroom. Major objectives center on sighted students becoming more knowledgable of the adaptations blind and low vision people must make to live in a sighted world, and recognizing the difference between sympathy and understanding when interacting with the visually handicapped. The curriculum presented can be adapted for any age and for any depth of study. Almost all chapters contain reference sections, and there is a section for selected readings at the end of the book.

Mills, A. E., ed. **Language Acquisition in the Blind Child, Normal and Deficient.** College-Hill Press, Inc., 4284 41st St., San Diego, CA 92105. 1983. 242 p. About $27.50. The papers contained in this study of normal and deficient language acquisition were contributed by persons working in the fields of education, medicine, psychology and linguistics. Individually authored chapters concern phonology, semantics, pragmatics and intervention. Results of work with blind children are reported, and issues raised by research which emphasize the relevance of findings from the blind to theories of language acquisition are discussed.

The book examines the use of evidence from the blind child, to evaluate the role of vision in the language acquisition of sighted children. Contents of the chapters suggest that blindness alone is not enough to produce deviant language acquisition; however, it is blindness, together with other handicaps, that increase the chances of language disorders. The book also presents ways to compensate for lack of vision in order to reduce the effects of other handicaps. It is intended to be of interest to both readers working with blind children, and those who have a general interest in language acquisition.

Smith, Audrey J. & Cote, Karen Shane. **Look at Me: A Resource Manual for the Development of Residual Vision in Multiply Impaired Children.** Pennsylvania College of Optometry Press, Philadelphia, PA 19141. 1982. 160 p. $10.00. This textbook for educators of visually and visually/multiply handicapped children has application both at the preservice and inservice levels of training. The basic structure and function of the eye is outlined, and common disorders and diseases of the eye are explained. Using a case study approach, sensory integration is discussed as an important part of a successful vision stimulation program. The text outlines and stresses the importance of a complete functional visual evaluation before selecting an appropriate vision stimulation sequence of activities. Two complete chapters are devoted to a collection of suggested activities. Variable rate of progress, appropriate materials, priorities in scheduling therapy, the learning environment, important medical information, and motivation of child and educator are presented as essential considerations of a well planned program. Parental participation and family cooperation with educators is encouraged in order to produce an interdisciplinary approach and provide additional sources of information concerning the child. By fostering a follow-along program at home, a climate of understanding and support is fostered which affords the child a better chance of success.

NEW FILM

Good Start includes audio-visual training materials to assist local education agency staff and parents who are involved in the education of children with a visual handicap. Regular classroom teachers, administrators, psychologists, physical education teachers and other professionals can use the materials to learn how to adapt what they do to the special needs of the visually handicapped student. Parents will learn how to work with their local education agency in developing their visually handicapped child's IEP.

Among the materials is a film, "No Two Alike," which shows the role of the regular public school teacher in the education of the visually handicapped student and discusses available support personnel, special services, techniques and devices. The film provides an historical background of the education of visually handicapped children both in the public school system and in a residential school setting. It describes public school services for visually handicapped students in urban/suburban settings and in rural settings. Also provided is an overview of P.L. 94-142, including a discussion of the Individualized Education Plan.

Good Start also includes six filmstrips with accompanying cassettes, as follows. "Just Getting Around" shows simple techniques sighted persons can use to guide visually handicapped students in and out-of-doors. "So, You're Going to Have a Visually Handicapped Child in Your Class" provides specific tips and techniques for the regular classroom teacher with a visually handicapped student. "One in a Thousand" explains the role of the school administrator and the supportive services provided by the special teacher of the visually handicapped in the successful integration of visually handicapped students in public school settings.

"One of the Gang" shows how visually handicapped children can be integrated into physical education and recreational activities with their sighted peers. "A Test of Skills" demonstrates how a school psychologist can assess a visually handicapped student using special techniques and specially designed and adapted tests. "Best Education Possible" shows parents of visually handicapped children how they can help their child to get the most, both academically and socially, out of a public school education.

Good Start provides an excellent discussion guide for the film and each filmstrip. It may be borrowed from Technical Assistance for Sensory Impaired Programs (TASIP) and from the Eastern Pennsylvania Special Education Regional Resources Center (RRC).

Film/16mm/color/19 minutes
Filmstrips/color/12 minutes each

American Foundation for the Blind, 15 West 16th St., New York, NY 10011. 1981. $300.00 for complete set.

TEST

The **Perkins-Binet Tests of Intelligence for the Blind** is an individually administered measure of intelligence for children. The test was normed on a sample of 2,153 legally blind students enrolled in day school and residential school programs throughout the United States, approximately 13% of the total population of blind students in the country in 1962 when the development of the test began. The manual does not indicate if the standardization and normative samples were different or one in the same.

There are two forms of the test. Form N for subjects with non-usable vision is comprised of 94 test items arranged from age 4 through 18. Form V for subjects with usable vision consists of 99 items arranged from age 3 through age 18. The two forms of the test contain the following types of items:

1. Verbal items are oral and are administered with no change in content or mode of presentation from the original Stanford-Binet scale.
2. Tactual items are presented via visual methods but for which three dimensional objects were substituted for printed materials.
3. Performance items are those for which an adaptation of the instructions for performance of the task was necessary.

In addition to the changes from the original Stanford-Binet mentioned above, other alterations include a) the omission of time limits, b) presentation of "digit memory" in serial order, and c) increase of the failure limit on Vocabulary from 6 to 8 consecutive failures. The Intelligence Quotient is obtained through the standard Stanford-Binet procedure using tables provided for each of the two forms.

The Perkins-Binet may be administered by psychologists or other professionals qualified to administer individual intelligence tests. Anyone planning to use the test should first read the article, **The Perkins-Binet Tests: A Critique and Recommendation** by Ward and Genshaft, which appeared in *Exceptional Children,* Volume 49(5), pp. 450-452. The article provides specific suggestions for organizing the test materials, modifying the formalized language of the Perkins-Binet, and correcting the test manual directions. The test is currently being revised by the publisher, Perkins School for the Blind, which cautions users to use the test primarily as a diagnostic instrument until further research on the test is completed.

Perkins School for the Blind, Watertown, MA 02172-9982. 1980. Complete Kit $192.50.

PRISE CENTER SERVES YOU

PRISE Staff Members

(The following profiles complete the introduction of PRISE staff members which began in the November 1983 Reporter.)

Susan Volk has worked for both the Regional Resources Center and the PRISE project for 10 years on a part-time basis. She has a B.A. in Psychology and an M.S. in Educational Research, both obtained from West Chester State College. In addition to literature searching, her other responsibilities include report writing, and in-house data management with the project's Apple IIE computer.

Peggy Clarke graduated from a Maryland liberal arts college with a B.A. degree in English/Journalism and worked for six years with an advertising agency. After raising six children, she returned to the work force in 1978 as a part-time clerk with the Regional Resources Center. In January she became a substitute Information Specialist at PRISE with responsibility for managing the test collection. "These four months have been a stimulating and informative time for me," she says. "The computer searching has been a real learning experience, and I've seen first hand the time, energy and hard work that so many people devote to special education in Pennsylvania."

Sue Volk (left) and Peggy Clarke display a diagnostic test kit used with young children who have communication problems.

Mattie Caldwell greets clients who visit the Center.

Mattie Caldwell serves the PRISE Center in a secretarial capacity. Among her duties are typing correspondence and annual reports, as well as preparing a computerized monthly report. Caldwell also is involved in the technical processing of library cards and assists clients who visit the library. "I have enjoyed my work in several of the Intermediate Unit's projects over the past ten years," says Caldwell. "At PRISE I really like working with the staff and helping the clients who come to the Center."

Pennsylvania Resources and Information Center for Special Education (PRISE) is a project funded by the Pennsylvania Department of Education, Bureau of Special Education, through P.L. 94-142, and is administered, managed and supervised by Montgomery County Intermediate Unit No. 23, Erdenheim, Pennsylvania, Dr. Dennis Harken, Executive Director.

Marianne Price, Project Director
Phil Juska, Assistant Director

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